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COMMON-SENSE

ARITHMETIC

FOR

COMMON SCHOOLS.

FIRST PART.

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NEW YORK:
A. LOVELL & CO.
1888.

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ADVERTISEMENT.

In teaching Primary Arithmetic, two results are sought, — *first*, a knowledge of number as number and the simpler relations of numbers; *second*, facility in the mechanical processes in the use of numbers. The first is secured through the action of the senses and the imagination; it is essential to the latter, which is realized in the intelligent, accurate, and ready application of this knowledge in practical affairs.

Section I, of the *First Part* treats of the earlier primary work in number, and indicates the kind of work practicable in the first year and a half or two years of school life. Sections II. to IX., provides the work suited to the next two years — such work as has been done, and is done, successfully under ordinary conditions. "The average class who do not attend school more than four years," having thoroughly mastered the work provided, will know more of arithmetic than common school pupils usually know; they will be able to work intelligently and readily in the primary operations, and will have a fair knowledge of the facts in United States Money, Fractional Parts and Denominate Numbers in their everyday applications. This text is published also in five pamphlets, containing respectively sections I., II. and III., IV. and V., VI. and VII., and VIII. and IX.

A review of the texts in Primary Arithmetic in common use will afford an ample apology for the appearance of this new book built up from the level of the children's work.

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SUGGESTIONS TO TEACHERS.

1. The text in Articles **1** to **20** gives an outline of the work in numbers practicable in the first year and a half or *two years* of the primary grades. It merely indicates a plan for teaching number as number and simple relations of numbers. Resources for matter rest with the teacher.

2. The text in Arts. **37** to **321** provides a course of work for the next two years, indicating a method of training which aims to develop facility in the use of numbers. The general plan or method is given with the work on *The Number Two.*

3. In teaching any set of combinations, the *first* step is, to lead the pupils, using familiar objects when necessary, to see clearly the results of the combinations, — the *second*, to assist the pupils to memorize these results as abstract facts as given in the Tables,— the *third*, to assist the pupils to acquire facility in the application of these facts, by means of such oral and written work as is indicated in the given examples and problems.

4. In teaching any Table, the work of the recitation is naturally divided into three parts: The oral drill on the part of the Table studied, examination of the work assigned for study — "busy-work," and oral and written work in *review.*

5. Arts. **37** to **321** may be assigned singly *as lessons.* If they be so taken, and each section be reviewed when completed, *daily lessons for two school years will be found.* Note that each Article, as **141**, provides oral and written work on the table under which it is found, with review of previous work. *Similar work should be dictated at every recitation; this is imperative.*

6. In the work with any number, as *Three*, pp. 31 to 40, note that that number indicates how many are *added*, *subtracted*, *multiplied*, or *divided by*. *Threes* are added to other numbers, not other numbers to *three*, — the combination in this case is 7 *and* 3, not 3 *and* 7; *threes* are multiplied by other numbers, not other numbers by *three*, — the combination is 5 *times* 3, not 3 *times* 5. Bright pupils, however, may see that the results in 7+3 and 3+7 are equal, and should be allowed to do so.

7. In division, there are two separate processes, *division* and *separation;* these should be distinct in the pupil's mind. Compare $10÷$3 with *one third* of $10.

8. The important feature in the work is *addition;* aim at accuracy and rapidity.

9. Teach incidentally the common measures and weights. Illustrate these by real standards.

10. In references to measurements, illustrate the work with full sized figures when possible.

11. Have fractions changed to simplest forms, — as, 2 fourths = 1 half, 6 eighths = 3 fourths, etc. *Illustrate with objects.*

12. Show how U. S. Money may be 'pointed' and read as dollars and cents; as, 5 times 75 cents = $3.75.

13. Show how to add two-place numbers by taking *tens* and *ones* separately; as, 35+59=? 35+50=85, 85+9=94.

14. Show how to multiply any number by 10, 100, etc., by "annexing ciphers."

15. Show how to divide by 10, etc., by "cutting off."

16. Show now to multiply by 2, 3, and 4 place numbers.

17. Show the process in Long Division, using these steps: —

1. Find a number on the left which will contain the divisor.
2. Find how many times.
3. Multiply.
4. Subtract.
5. Annex the remainder to the next dividend figure.

18. Have pupils make problems to suit given examples. Pupils will understand readily the relations of numbers in problems which they make themselves.

19. Successful work demands the closest attention on the part of the pupil, that he do his work himself — which is his right, that he be given only such work as he can do with reasonable effort. All written work should be scrupulously neat.

20. Before leaving the work on any number, the average class should be able to solve, in reasonable time, a set of ten examples and problems similar to any typical set of ten, as **Art. 144,** giving eighty to ninety per cent. of the results correct. Nothing is gained by going faster than can be done with good results· give each Section, after II., at least two months' work.

COMMON-SENSE ARITHMETIC.

FIRST PART.

I. PRIMARY NUMBER-WORK.

To the Teacher. — The first lessons in numbers must necessarily be very simple, the object being to teach the children to *know*, *count*, *read*, and *write* simple numbers.

The first step is to teach the numbers *one* to *ten*, with their names and the figures representing them — *to count ten*. All counting should be done with objects which the children may at least see, and, if possible, hold in their hands, — the eye is aided by the hand, for what one counts with his hand, he must see. There must be no senseless repetition of *one*, *two*, *three*, etc. A variety of objects should be used; they may be any with which the children are familiar; as, sticks, pegs, marbles, cubes, books, apples, gun-wads, toy-money, the balls on a numeral frame, marks on the blackboard, the common measures of length and capacity, etc. The most useful objects are blocks *one inch square* and *one inch by two inches*, *one half inch thick*. With these a great variety of combinations may be made to show compositions, additions, subtractions, multiplications, etc. They may be found at any Kindergarten supply store.

On entering school, children usually know *one*, *two*, *three* as applied to objects, and often more. The careful teacher, will, however, take nothing for granted, but will begin the work where the children are found to have positive knowledge. The teacher's first work will be to find out just what each child knows about number, then to lead the children to talk freely about what they know. The nature of the examination will be determined by the objects to be attained, the character of the class and the resources of the teacher, who will understand that the lesson forms here given are not to be followed literally, but that the results indicated are to be secured through some such exercises.

Classes should be small, and, for convenience, should stand about a table of proper height, upon which the objects used may be handled. All combinations should be illustrated with objects until the relations are clearly seen and the results are thoroughly fixed in the memory; but when objective illustration ceases to be an aid to the understanding, it should be discontinued. The mental processes involved are — perception, conception, abstraction, and finally, the memorizing of the results discovered.

Counting from One to Ten.

One and Two. — *Teacher.* Willie you may bring me a book from the table. Mary, you may bring me another. How many books did you bring me, Mary?

Mar. One book.

Tr. How many did you bring me, Willie?

Willie. One book.

Tr. How many books have I in my hand, children?

Children. Two books.

Tr. One book and one book are how many?

One and one are how many?

John may bring me two books. Two crayons.

Right. If I have one pencil, how many more must I get to have two pencils?

Ch. One more.

Tr. Harry may bring me two pencils from the box. How many will I have, if I give one to John.

Ch. One.

Tr. Right. Now I will give the one I have left to John, and he may put them in the box. How many pencils did John put in the box?

Ch. Two pencils.

Tr. Sam may tell me what John did.

Sam. John put two pencils in the box.

Tr. Right. Susie may show me two books; two slates; two boys. How many hands has a boy? How many thumbs have you on each hand? on both hands? You may each hold up two hands; two fingers.

How many eyes has each of you?

Ch. Two eyes.

Tr. That is nice; with two sharp eyes, a little boy or girl ought to see a great many very pretty things. Now I will make on the blackboard two boys for you. — They are running to find another boy. To-morrow they will all be together, and you may tell me then how many we shall find.

Do not hurry these exercises; do not expect to teach the number *two*, *three* or *four*, or to secure freedom of expression, in a single lesson. The work indicated in a single article of this Section will often afford material for several lessons. Remember that the work is new to the child, and that his school relations are largely new to him. See that each child's attention and interest are fully enlisted, and that he understands and answers for himself, not in imitation of his fellows. The exercises should be short and carefully prepared for by the teacher.

It is not necessary, in this connection, to teach the figures to represent the numbers; it may be done readily, and many primary teachers prefer to teach the figures and the number-words with the numbers. The difficulties are found in teaching the simpler numbers as numbers. Suppose you are to teach the figures with the numbers, thus providing a form of 'busy-work' for the children. Care must be taken that the children are not led to think of the figures as numbers instead of symbols merely; when this result is noticed, discontinue the use of figures for a short time.

Teacher. If I make a long straight mark to stand for one boy, how many must I make to stand for two boys?

Ch. Two marks.

Tr. Yes; see, I have made them for you on the board. Now I will make something else to stand for two boys; we call it a *figure two.* What did I say the *two marks* were for? The other mark? And what shall we call it?

// 2

Ch. A *figure two.*

Tr. Good; Now you may make some of these *two marks* and *figure two's* on your slates, just as I have made them on the board.

2. Three. — *Tr.* Susie may bring me two books. Two books are how many more than one book? What shall we take to make two books?

Ch. One book and one book.

Tr. Would you rather have two apples than one? Why?

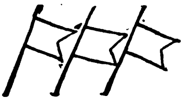
Ch. Two apples are more (or, one more) than one.

Tr. Yes, I think that is the reason. Do you remember the boys we had on the board yesterday? Does any one know how many boys there were after the two boys found one more boy?

Ch. Three boys.

Tr. Right. I think some of you knew before. Here they are; let us count them. You may point to them, Mary. *One*, *two*, *three*. How many boys make three boys?

Ch. Two boys and one boy.



Tr. Right. I have made some flags on the blackboard; you may count them. How many will be left, if I erase one?

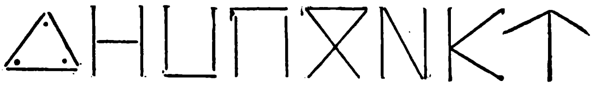
If I give each of three girls an apple, how many will all have? Two apples and one apple are how many apples? Two and one are how many?

John may make three round dots on the board.

Willie may show me three books.

You may each show me three fingers on your left hand; three on your right hand.

I will give each of you a bunch of these nice sticks, and you may try to lay them on the table just as I place these marks on the blackboard. We will see what we can make: —



How many will you have in each group? The first looks like a pen with three sides, doesn't it? I will put three dots in this one. Who can tell what the next one looks like?

You have all done nicely. Some day we will see in how many more ways we can place three sticks.

3. If I have two oranges and buy one more, how many will I have? Name three days in the week. Tell me the names of three boys in this class; of three other boys. Two boys and one girl are how many children?

If I have two pencils, how many more must I get to make three pencils?

If I have an orange, and George and Mary each give me one, how many will I have?

How many of you can make a *figure two* for me to-day? Susie may make one for us on the blackboard. John may make as many marks beside it. Sam may make three marks in another place. You may count them.

One, *two*, *three*.

Right. I will make a *figure three* beside Sam's *three marks*, and you may each make *three marks* on the blackboard, and a *figure three*.

That is done very well; but I think we shall do better next time. You may each make the same neatly on your slates three times.

4. Four. — How many boys are two boys and one boy? Mary may point out three boys. John may bring me as many books. Willie may make as many dots on the blackboard.

Here are three marbles, if John gives me one more marble, how many will I have?

Show me four fingers; four erasers; four books.

If I tell John, Sam, Mary and Susie to stand, how many children will rise?

How many are three apples and one apple? Three and one are how many? How many must be put with three to make four?

Willie had three oranges and another boy gave him one more, how many had he then? Show me with your sticks. Show the same with these pebbles.

Four are how many more than three?

Three are how many less than four?

Susie may make four marks on the blackboard.

You may count them.

One, two, three, four.

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I will make a *figure four* beside Susie's *four* marks. You may each make *four marks* and a *figure four* on the blackboard.

5. How many numbers have we learned? How many thumbs have you on each hand?

I will make *one* hat on the blackboard, and make a *figure one* beside it. You see the *figure one* looks like a *one mark.*

You may count the dots in the groups I make on the blackboard, and I will write the figure for each number under the dots.

*	* *	* * *	* * * *
1	*2*	*3*	*4*
one	*two*	*three*	*four*

I will write the name of each number under it, and you may copy them all on your slates, — the dots, the *figure-numbers* and the *word-numbers.* You may take these cubes and place them like the dots.

6. Five, etc. Teach the number *five* as made up of the *four* ( ) already found and *one* ( ) more,— and counted one *one* ( ), *two* ( ), *three* ( ), *four* ( ), *five* ( ). Care must be taken that the children do not recognize the *fifth*, or last *one* ( ) counted, as *five* ( ), but the *whole* as *five*,— and that they *think the number* as well as say the word.

This *counting five* does not involve any further knowledge of the composition of the number, as that *five* is made up of *three* and *two*.

After the children have counted *five* with a variety of objects, teach the *figure* and the *word* representing the number, and have the children copy or write them on the blackboard and on their slates.

Teach in the same manner the remaining numbers to *ten*, counting objects in great variety, and always until the *idea of number* is thoroughly fixed in the mind. When the numbers to *ten* with objects have been thoroughly learned, the *abstract* numbers may be counted,— that is, the *names* of the numbers may be told.

The interest of the children may be greatly increased if the teacher will use in illustration of the work, in connection with objects available, such simple drawings as the children can copy on their slates and on the blackboard. A little practice will enable the teacher to sketch readily in outline a variety of familiar forms.

In this connection, much in the line of *form*, *color* and *language* may be taught. Have a given number of sticks of different colors laid to represent given familiar forms or objects, as a triangle, a square, a chair, the straight-line letters of the alphabet, etc. Have the children name the colors used, and have something told about each combination.

Do not insist that the children, in answering questions, shall always make complete sentences, thinking that such work is necessary to secure correct forms in language. Adequate results in this direction are secured when the children are able to express the full idea completely. In answer to the question: "Three cents and one cent are how many?" "Four" is quite as complete as "Three cents and one cent are four cents."

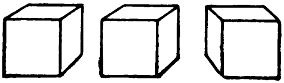
The Composition of the Numbers to Ten.

When the children are able to count objects to *ten* readily, teach the several facts of the *composition* of each of the numbers to *ten*.

Children will usually know *at sight* groups of objects to the number of *two*, *three*, and perhaps *four*, as *two*, *three* and *four;* of the numbers beyond these, they learn the 'how many' at first by counting, afterwards by recognizing the groups of which the numbers are composed, as making the numbers, — that is, they may see *five* as *three* and *two* (*** * *), *six* as *three* and *three* (*** ***), etc.

The ability to discover groups readily, and the numbers which they compose, involving processes of analysis and synthesis, is important and children should be carefully trained not only to discover the groups composing the number, and the number through its groups, but also in comparing the number with its parts.

7. Three. — *Teacher.* Count these blocks which I have placed on the table. How many are there?



What make three blocks?

Ch. One block and one block and one block.

Tr. What else make three blocks? What else?

Tell me something about two blocks and one block. About two boys and one more boy.

Mary may give two sticks to John, and one to Harry, and tell me what she does. Call them apples, and tell me. Tom may tell me about two cents and one cent.

Willie may take one cube and two more cubes, and Harry may tell me about them. John may tell me about one cent and two cents. Who can tell me something about one boy and two boys?

One boy and two girls are how many children? If I give one orange to each of two boys and one girl, how many oranges do I give away?

(The teacher should study carefully the facts in *Three.* See *Four,* page 14.)

8. *Tr.* There are three cubes on the table; Willie may take away one and tell me about them.

Willie. There were three cubes on the table; I took away one, and there are two left.

Tr. You may each take three things of the same kind. Jane may tell me about her pencils. Tom may tell me about his splints.

Tom. I had three splints; I gave one to John and had two left.

Tr. Who can tell me about two taken from three? Joe; show me with your sticks; call them cents, and tell me about them; call them apples.

Joe. A boy bought three apples; he gave away two of them, and had one left for himself.

Tr. John may get three crayons from the box. Give them to Tom; how many have you left?

Mary may make three marks on the blackboard; Susie may erase three of them; how many are left?

9. Here are three pencils on the table; John may take away from them one pencil as many times as he can. How many times one pencil can you take from three pencils? How many pencils in one third of three pencils? What part of three pencils is one pencil?

Who can tell me about one third of three things? Show me with these blocks.

Willie may take three marbles; give one third of them to John; how many have you left?

Tom may take three strips of paper, — they are all alike; can you give half of them to Mary? Show how. Harry may tell something about one half of three apples; show with your sticks.

10. Take two crayons from the box; how many more must you take to have three? Two pencils are how many less than three pencils? how many more than two? how many more than one? how many times one?

11. Four. — *Teacher.* I have placed some marks on the blackboard; tell me how many.

/// /

How do you know there are four?

Ch. We counted them.

Tr. How else may you know there are four?

Ch. We see *three* and *one; three* and *one* are *four.*

Tr. What else make four? What else? John may show me with his blocks. You may each tell something about four things, and show what you tell.

(*Ch.* Show: 111 1, 1 111, 11 11, 1 1 1 1, 1 11 1, etc., and tell about the combinations they have made.)

The children having found the combinations in the number, and that make up the number, these may be taken for purposes of drill in sets, as follows: —

(*a*) Four ones, three and one, one and three;
(*b*) Two and two, two twos;
(*c*) One from four, three from four, two from four, four from four;
(*d*) Two in four, one in four, four in four;
(*e*) One fourth of four, one half of four.

Each set will require several lessons, and should be followed by reviews and a comparison of the number with one, two and three.

12. (*a*) *Teacher.* Here are three cubes; place one more with them; how many are there now? Who can tell something about three and one? Call them apples and show me.

I have three crayons; Susie may bring me one more. Sam may tell something about three crayons and one more.

You may each take one thing from the table; take three more like the one. You may each tell something about your one and three more. Tom may begin.

Tom. I had one marble and found three more; then I had four marbles. (Shows with objects.)

Tr. Joe had three cents and sold a top for one cent, how many cents had he then? Show with your blocks.

In a class there are one boy and three girls; how many children? How many are three cents and one cent?

Three pencils and one slate are how many things? Four are how many more than three?

13. (*b*) Here are two sticks with two more, how many in all? Take two blocks, another two; how many have you now? How many hands has a boy? two boys?

I have two pairs of gloves, how many gloves?

I paid two cents each for two apples; how many cents did I pay for both?

There are two pints in a quart; how many pints are there in two quarts? (Suggestion 9.)

What cost two hats, if the price of each hat is two dollars?

14. (*c*) A boy had four marbles given him; he lost one of them; how many had he left?

Place four blocks on the table; take away one; how many are left? Call them books and tell me about them. Tell me something about one orange from four oranges; one boy from four boys.

There were four girls at a party; two went home; how many remained; two taken from four always leave how many? Three taken from four?

Hold up four fingers on your right hand; close three of them; how many remain open? Tell me something about three from four; about two oranges from four oranges; about two cents from four cents.

A boy had four apples; he gave four away; how many had he left? Show with your sticks.

There were four boys in a class; after four boys were sent home, how many remained?

15. In the review lessons, have the children make tables showing with figures what they have found or done with their objects, — as in "What make four?"

This will provide a form of busy-work; and the children may then 'tell something,' or make simple problems about the combinations they have made. Teach the use of the signs, calling that for addition *and*, and that for equality *make*, or *are*. The objects used to illustrate the combinations may be laid in proper positions on the table or desks.

111	1	3+1=4
1	111	1+3=4
11	11	2+2=4
	Etc.	

Teacher. If I make a long straight mark to stand for one boy, how many must I make to stand for two boys?

Ch. Two marks.

Tr. Yes; see, I have made them for you on the board. Now I will make something else to stand for two boys; we call it a *figure two.* What did I say the *two marks* were for? The other mark? And what shall we call it?

Ch. A *figure two.*

Tr. Good; Now you may make some of these *two marks* and *figure two's* on your slates, just as I have made them on the board.

2. Three. — *Tr.* Susie may bring me two books. Two books are how many more than one book? What shall we take to make two books?

Ch. One book and one book.

Tr. Would you rather have two apples than one? Why?

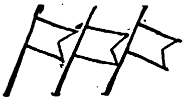
Ch. Two apples are more (or, one more) than one.

Tr. Yes, I think that is the reason. Do you remember the boys we had on the board yesterday? Does any one know how many boys there were after the two boys found one more boy?

Ch. Three boys.

Tr. Right. I think some of you knew before. Here they are; let us count them. You may point to them, Mary. *One*, *two*, *three.* How many boys make three boys?

Ch. Two boys and one boy.



Tr. Right. I have made some flags on the blackboard; you may count them. How many will be left, if I erase one?

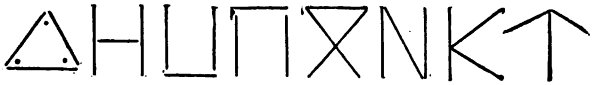
If I give each of three girls an apple, how many will all have? Two apples and one apple are how many apples? Two and one are how many?

John may make three round dots on the board.

Willie may show me three books.

You may each show me three fingers on your left hand; three on your right hand.

I will give each of you a bunch of these nice sticks, and you may try to lay them on the table just as I place these marks on the blackboard. We will see what we can make: —



How many will you have in each group? The first looks like a pen with three sides, doesn't it? I will put three dots in this one. Who can tell what the next one looks like?

You have all done nicely. Some day we will see in how many more ways we can place three sticks.

3. If I have two oranges and buy one more, how many will I have? Name three days in the week. Tell me the names of three boys in this class; of three other boys. Two boys and one girl are how many children?

If I have two pencils, how many more must I get to make three pencils?

If I have an orange, and George and Mary each give me one, how many will I have?

How many of you can make a *figure two* for me to-day? Susie may make one for us on the blackboard. John may make as many marks beside it. Sam may make three marks in another place. You may count them.

One, *two*, *three*.

Right. I will make a *figure three* beside Sam's *three marks*, and you may each make *three marks* on the blackboard, and a *figure three.*

/// 3

That is done very well; but I think we shall do better next time. You may each make the same neatly on your slates three times.

18. Twelve, etc.— The teacher arranges in proper position ten objects, and gets the number from the children; places two more * * * * * * * * * * with the ten and gets the number, * * *twelve*, from the children, or tells it.

The children are then led to discover the facts in *twelve*, as in *eleven*, and helped to master these through the requisite number of lessons and reviews.

Teacher. How many stars are there altogether? How do you know there twelve, Willie?

Willie. I counted them.

Tr. How else may you know, Susie?

Susie. I see *ten* and *two*, *ten* and *two* are *twelve*.

Tr. What make twelve? What else? What else?

Twelve are two more than how many? one more?

What do you call twelve eggs?

How many in half a dozen? How many *twos* in twelve? How many *threes?* (etc.) Show me with your blocks. Write the figures that say twelve.

How many in one fourth of a dozen? How many pairs in a dozen?

You may each arrange your blocks in all the groups you can to make twelve, and make a table with figures to show your work. What can you show, Harry?

Harry. *Three* and *three* and *three* and *three* make *twelve*.

* * *   * * *   * * *   * * * $3+3+3+3=12$.

The available combinations in *twelve* are found similar to those in eleven, and may be fixed only through several thoughtful lessons and reviews.

The work with the numbers to *twenty*, as outlined here on a few pages, can be accomplished by the average class with skillful instruction, in not less than a year and a half, and two years may be devoted to it with profit.

Through the whole of this work, have the children illustrate their combinations with objects,— count and work with hand and eye.

The Numbers above Twenty.

19. The Tens. — When *ten* has been learned as *one ten*, and *twenty* has been counted and the facts in its composition found, it may be recognized as *two tens;* the other Decades, 30, 40, 50, etc., may be recognized in the same manner as *three tens*, *four tens*, *five tens*, etc., and the figures and number-words representing them may be taught.

The teacher having objects arranged as in the margin, if the first row be counted and found *one* ten, the second row another ten, the *two* rows are found as *two tens* or *twenty*, — three rows as *thirty*, — four rows as *forty*, — etc.

```
*  *  *  *  *  *  *  *  *  *  10
*  *  *  *  *  *  *  *  *  *  20
*  *  *  *  *  *  *  *  *  *  30
*  *  *  *  *  *  *  *  *  *  40
Etc.                         Etc.
```

20. The Intermediate Numbers. — When several decades with their names and figures have been learned, the Intermediate Numbers may be taught. The children will recognize three rows of ten objects, or *three bundles of ten* each, as *thirty*, and three rows or bundles of *tens* and *four more* as *thirty-four*, and will learn readily to write the number in figures.

```
o  o  o  o  o  o  o  o  o  o
o  o  o  o  o  o  o  o  o  o
o  o  o  o  o  o  o  o  o  o
o  o  o  o
```

In teaching the numbers above twenty, the available combinations are: —

The tens and one of the numbers,
The equal parts of the numbers,
The simple unequal parts of the numbers,
The equal numbers in the numbers,
Etc.

Small sticks or splints, neatly tied in bundles of ten each, with separate sticks, being easily handled and arranged in position, may be used with good effect in showing these combinations, and, in that form, objects may be readily counted by tens.

In teaching the numbers from *twenty* to *one hundred*, the most important facts relate to the *tens* and *ones* of numbers, — as that *forty-four* is made up of *four tens* and *four ones*.

Children should be taught to place objects to show how many a word or figure-number represents, as well as to write the word or figure-number for a given arrangement of objects. It is useless in this connection to teach the meaning of 'orders' and 'periods.'

The following **exercises** will be found useful: —

1. Count, with the hand, small numbers of objects by *twos*, — as sticks, 2, 4, 6, 8 *sticks*.
2. Begin with *one* and 'count on' *twos*, — as 1, 3, 5, etc.
3. 'Count off' *ones* and *twos*, as with 20 blocks — 20, 19, 18, 17, etc. — 20, 18, 16, 14, etc.
4. Name the *even* numbers to 30; the *odd* numbers.
5. Count, with the hand, small numbers of objects by *threes*.
6. Count, with the hand, objects by *fives*; by *tens*.
7. Count objects by *fours*.
8. 'Count off' by *tens*; by *fives*; by *threes*.

In teaching the larger numbers, the use of objects, other than the balls of a numeral frame, or marks on the blackboard or slates, may be inconvenient; but it is imperative that every number taught shall have its proper concrete relation. It is not necessary to carry the work of counting objects beyond one hundred. If children have acquired correct ideas of number to this extent, they will acquire a knowledge of the larger numbers without instruction.

With the preparation which the work indicated in the preceding outline should give, if properly taught, the 'mechanical' work with the numbers *two* to *nine* will be readily mastered, and result in the accuracy and readiness which should characterize arithmetical operations.

II. THE NUMBER TWO.

Addition.

21. For the first lesson, —

1. Arranging objects as in I., indicate a part of the Table as in II. Have the children learn the combinations by completing the forms, *using objects.*

I.	*	* *	II.	1+2=
	* *	* *		2+2=
	* * *	* *		3+2=
	* * * *	* *		4+2=

2. Place on the board a column, III., having no number with a right-hand figure greater than 4; have the children copy the column, and *add two to each number.*

III. 3
1
4
2
12
14
11
13

3. *In the recitation,*— (1) have pupils recite the Table as far as learned; (2) have pupils add *two* orally to the numbers in column III.; (3) get answers to simple oral concrete and abstract questions,— as, "If you have two marbles and I give you two more, how many will you have?" "How many are 3 cents and 2 cents?" "12 and 2 are how many?" "$14 and $2?" "13 bu. and 2 bu.?" etc.

Have pupils illustrate their work with objects. Several lessons may be required to fix the facts indicated.

22. For the next lesson, —

1. Extend the Table to 7+2, having the facts of the combinations as found in **21**, 1.

2. Extend column III., to include 5, 6, and 7; have the pupils copy the column, and add two to each number.

3. *In the recitation,* —(1) have the Table recited as far as learned; (2) have pupils add *two* orally to the numbers in column III.; (3) get answers to simple oral concrete and abstract questions, as in **21**, 3.

23. For the next lesson, —

1. Extend the Table to 10+2.

2. Extend column III. to include any small number.

3. Place on the board short columns and simple examples, as in IV., V. and VI.; have the pupils copy and add these.

4. *In the recitation,* — (1) have the Table recited; (2) have pupils add *two* orally to the numbers in column III.; have pupils add column IV. and examples V. and VI.; (3) get answers to simple oral concrete and abstract questions, as in **21**, 3; and (4) have pupils make similar examples for oral and written work.

IV.	V.	VI.
2	21	121
1	12	22
2	22	211
2	20	102
1	11	212
2	22	121
(?)	12	122

In using column IV., have one pupil add the column, have another say *one* and add, a third say *two*, etc. In adding, have only the results named, as in IV. say: "2, 3, 5, 7, 8, 10."

The following may be considered *a typical lesson* as assigned for 'busy-work' or preparation: —

(1.) John had 5 marbles left after losing 2; how many had he at first?

(2.) Tom is 9 years old, and Mary is 2 years older; how old is Mary?

(3.) How many are 11 girls, 2 girls and 2 girls?

(4.) Harry had 7 oranges; he bought 2 more, and I gave him 2; how many did he have then?

(5.) There are 12 boys in one class and 21 in another; how many in both classes?

(6.) Add 21, 22, 211, 112, 102, 121, 222 and 121.

(7.) Write 2, 1, 2, 2, 1, 2, 1, 2 and 2 in a column, and add the numbers; say *one* and add; *two; three;* etc.

24. For succeeding lessons, repeat, in form, the preceding; continue the work until pupils are able to give answers to combinations promptly, and add columns readily — *without counting up.* Ordinarily, an average class, with a good teacher, ll master the Addition of Twos in about fifteen lessons, — let m have twenty lessons if necessary.

Subtraction.

25. For the first lesson, —

1. Arranging objects as in I., indicate a part of the Table as in II. Have the pupils learn the combinations by completing the forms, using objects.

I.	ø ø	II. 2—2=	III. 3
	o ø ø	3—2=	5
	o o ø ø	4—2=	2
	o o o ø ø	5—2=	4
			12
			13
			14

2. Place on the board a column, III., containing small numbers ending in 2, 3, 4, and 5; have the pupils copy the column, and take *two* from each number.

3. *In the recitation*, — (1) have pupils recite the Table as far as learned; (2) have pupils take *two* orally from the numbers in column III.; and (3) get answers to simple oral concrete and abstract questions, — as, "If you earn five cents, then spend *two* of them, how many will you have left?" "Hold up four fingers; close *two* of them; how many remain open?" "Four apples are how many more than *two* apples?" "Three less *two* are how many?" etc. Have pupils show their work with objects.

Several lessons may be required to fix these facts; when they are thoroughly mastered, continue as follows: —

26. For the next lesson, —

1. Extend the Table to 8—2, having the facts of the combinations found as in **25**, 1.

2. Extend column III. to include small numbers ending in 6, 7, and 8; have the pupils copy the column, and take *two* from each number.

3. *In the recitation*, — (1) have the Table recited as far as learned; (2) have pupils take *two* orally from the numbers in column III.; (3) get answers to simple oral concrete and abstract questions, as in **25**, 3; and (4) review previous work.

27. For the next lesson, —

1. Extend the Table to 11—2.
2. Extend column III. as to include any small number.
3. Place on the board simple concrete problems, review work in Addition, and small examples in Subtraction, as in IV., V., VI. and VII., and have the pupils find the results.

IV. 39	V. 264	VI. 351	VII. 713
21	122	212	221

Explain the process of subtracting when a subtrahend figure indicates a larger number than the corresponding minuend figure. Do not give reasons; it is enough to say: "When the lower number is larger than the upper, call the upper number ten more than it is, then subtract; when you have called an upper number 'ten more,' call the next upper number one less than it is (or, call the next lower 'one more')."

4. *In the recitation,* — (1) have pupils recite the Table; (2) have pupils take *two* orally from the numbers in column III.; (3) have pupils go over the examples and problems assigned for 'busy work;' and (4) get answers to simple oral questions, as in **25**, 3.

The following may be considered *a typical lesson* as assigned for 'busy work,' or preparation: —

(1.) John is 9 years old; how old was he 2 years ago?

(2.) A boy earned $7; then spent $2; how much has he left?

(3.) There are 21 pupils in a class; 12 of them are girls; how many boys are there?

(4.) A man had $350; he paid $220 for a horse; how much had he left?

(5.) Add 21, 222, 121, 112, 202, 211, 201, 22 and 212.

(6.) Take 212 from 341.

(7.) Take 221 from 403.

(8.) There are 12 inches in a foot; how many in 2 feet?

28. For succeeding lessons, repeat, in form, the preceding; continue the work until the pupils are able to give results to combinations promptly, and are accurate and ready in making simple subtractions. About twelve lessons will be required.

At every recitation review Addition of Two.

Multiplication.

29. For the first lesson,—

1. Arranging objects as in I., indicate a part of the Table as in II. Have the pupils learn the combinations by completing the forms, using objects.

I.					II.	III.
				* *	1×2=	2
			* *	* *	2×2=	4
		* *	* *	* *	3×2=	1
	* *	* *	* *	* *	4×2=	3
* *	* *	* *	* *	* *	5×2=	5
						2
						4
						3
						5

2. Place on the board a column, III., containing the numbers, 2, 3, 4, and 5; have the pupils copy the column, and multiply *two* by each number.

3. *In the recitation*, —(1) have pupils recite the Table as far as learned; (2) leave pupils multiply *two* orally by the numbers in column III.; (3) get answers to simple oral concrete and abstract questions,—as, "What cost four pencils, at *two* cents each?" "I gave *two* apples to each of three boys, how many did I give to all?" "How many are three twos?" etc.; and (4) review Addition and Subtraction.

Show the relation of Multiplication to Addition. This Table may be used to illustrate the facts as well as the form in **29**, I.

It is as well to say '*three twos*' for the form 3×2, as to say '*three times two.*'

1	2	3	4	5
2	2	2	2	2
	2	2	2	2
	4	2	2	2
		6	2	2
			8	2
				10

30. For the next lesson,—

1. Extend the Table to 8×2.

2. Extend column III. to include 6, 7 and 8; have the pupils copy the column, and multiply *two* by each number.

3. Place on the board small examples, using 1's, 2's and 0's in the multiplicands, and 2, 3, 4, 5, 6, 7 and 8 for multipliers; have the pupils copy these, and find the results.

4. *In the recitation,* —(1) have the Table recited as far as learned; (2) have pupils multiply *two* orally by the numbers in column III.; (3) have pupils multiply small numbers like 21, 112, 221, etc., by the numbers 2 to 8, as in **30**, 3; (4) get answers to simple oral questions; and (5) review preceding work.

31. For the next lesson,—

1. Extend the Table to 10×2.

2. Extend column III. to include 9 and 10.

3. Continue the work with column III., and place on the board small examples, as in **30**, 3, using the numbers 2 to 10 as multipliers.

4. *In the recitation,* —(1) have the Table recited; (2) have pupils multiply *two* orally by the numbers in column III.; (3) have pupils multiply small numbers by the numbers 2 to 10, as in **30**, 3; (4) get answers to simple oral questions; and (5) review preceding work.

The following may be considered *a typical lesson* as assigned for 'busy work' or preparation:—

(1.) How much will 9 pencils cost at 2 cents each?

(2.) How many are 7 times 2, and 1? 5×2,+1?

(3.) In one dozen there are 12 things; how many in 5 dozen?

(4.) What cost 6 cows, if the price is $22 each?

(5.) Write the numbers 2, 1, 2, 2, 1 and 2 in a column and add them; say *one* and add; say *two; three;* etc.

(6.) Add $12, $21, $122, $102, $221 and $222.

(7.) A man having $70, spent $22; how much had he left?

(8.) Multiply $21 by 7. Make a problem. (S. 18.)

32. For succeeding lessons, repeat in form, the preceding; continue the work until the pupils are able to give the results to combinations promptly, and are ready and accurate in making simple multiplications. If the work in Addition has been well done, about ten lessons will be required.

As preparation for the work in Division, such oral questions as, "How many are 4 times 2, and 1?" are valuable.

In every recitation, review some part of the work in the preceding operations.

Division.

33. For the first lesson,—

1. Arranging objects as in I. and III., indicate a part of the Tables as in II. and IV. Have the pupils learn the combinations by completing the forms, using objects.

I.	II.	III.	IV.	V.
*	2)1	c ɔ	½ of 1	6
**	2)2	o o	½ of 2	4
* **	2)3	oc ɔo	½ of 3	2
** **	2)4	oo oo	½ of 4	1
* ** **	2)5	ooc ɔoo	½ of 5	3
** ** **	2)6	ooo ooo	½ of 6	8
* ** ** **	2)7	oooc ɔooo	½ of 7	5
** ** ** **	2)8	oooo oooo	½ of 8	7

Have the combinations in II. read: "Two in one no times and one over," "Two in two once," "Two in three once and one over," etc.; have those in IV. read: "One half of one is one-half," "One half of two is one," "One half of three is one and one half," etc.

Illustrate each combination with objects, and have the pupils do the same.

2. Place on the board a column, V.; have the pupils copy the column, divide each number by *two*, and find *one half* of each.

3. *In the recitation*, — (1) have pupils recite the Tables as far as learned; (2) have pupils divide the numbers in column V. by two, and find *one half* of each, *orally;* (3) get answers to simple oral concrete and abstract questions, — as, "If you earn six cents and spend half of them, how many have you left?" "A girl has 7 cents; how many two-cent pencils can she buy?" "If I divide 5 apples equally among two boys, how many will each have," etc.; and (4) review the work in Addition, Subtraction and Multiplication.

34. For the next lesson, —

1. Extend the Tables to 14÷2, and ½ of 14, having the facts of the combinations found as in **33**, 1.

2. Extend column V. to include the numbers 9 to 14.

3. *In the recitation,* — (1) have the Tables recited as far as learned; (2) have pupils divide the numbers in column V. by *two*, and find *one half* of each, *orally;* (3) get answers to simple oral questions as in **33**, 3; and (4) review the work in the preceding operations.

35. For the next lesson, —

1. Extend the Tables to 20÷2, and ½ of 20.
2. Extend column V. to include the numbers 15 to 20.
3. Place on the board small examples for written work; have the pupils copy these, and perform the indicated operations.
4. *In the recitation,* — (1) have pupils recite the Tables; (2) have pupils divide the numbers in column V. by *two*, and find *one half* of each, *orally;* (3) get answers to simple oral qnestions; (4) go over the examples assigned for 'busy work;' and (5) review preceding work.

The following may be considered *a typical lesson* as assigned for 'busy work' or preparation: —

(1.) How many books at $2 each, cost $14?

(2.) John had 13 apples; he gave half of them to Harry; how many did he give to Harry?

(3.) I have $17; how many pairs of shoes can I buy, if they cost $2 a pair?

(4.) Two cows cost $55; how much did each cost?

(5.) There are 64 apples in a basket; if I take out half of them, how many will be left?

(6.) Add 22, 12, 221, 21, 211, 102 and 212.

(7.) Take 122 from 314. (8.) Multiply 212 by 9.

(9.) Divide 721 by 2. (10.) Find ½ of 248.

See Articles **37** to **44**.

36. For succeeding lessons, repeat, in form, the preceding; continue the work until the *twos* are thoroughly mastered. Ordinarily about fifteen lessons will be required for the work in Division, — twenty should be taken if necessary.

Keep constantly in mind the fact that Addition is the leading operation.

37. 1. How many times are 2 cents contained in 48 cents?

2. In one class there are 21 boys, in another 12, and in a third 22; how many in the three classes?

3. A boy had 17 dollars; he earned 12 dollars more, and his father gave him 2 dollars; how many had he then?

4. A man having $31, spent $12; how much had he left?

5. At 22 cents a dozen, what cost 5 dozen eggs?

6. Add 22, 21, 212, 121, 202, 20, 112, 21 and 212.

7. From 718 take 122. 8. Multiply 2122 by 9.

9. Divide 7132 by 2. 10. Find ½ of 2732.

38. 1. At $2 each, how many sheep cost $42.

2. If you have 25 cents, how many 2-cent pencils may you buy?

3. George is 13 years old; how old was he 2 years ago?

4. What will 9 tops cost at 2 cents each?

5. How many inches in a foot and a half? (S. 9.)

6. Add $122, $21, $112, $211, $121 and $222.

7. Take 212 feet from 310 feet. 8. Multiply $122 by 7.

9. Divide $214 by $2. 10. Find ½ of 315 bushels.

39. 1. How many quarts are there in 75 pints.

2. How many inches in 7 feet.

3. John has 12 marbles, and Tom has 22; if they divide them equally, how many will each have?

4. How many strings 2 feet long may be cut from a cord which is 23 feet long? (S. 9.)

5. Add 12, 211, 122, 212, 120, 202, 121 and 22.

6. Take 1212 from 1350. 7. Multiply 2122 by 8.

8. $21 are one half of how much. 9. Find ½ of 342.

40. 1. Add 22, 120, 212, 121, 211, 221 and 122.

2. Take 2212 from 3071. 3. Find 6 times 212 yards.

4. Divide 7935 by 2. 5. Find ½ of 1752.

6. What cost 9 tables at $22 each?

7. If $22 equal half of my money, how much have I?

8. Tom has $21; Ray $12 more than Tom; how much has he?

9. How much added to 12 feet will make 21 feet?

10. How many inches in 3 feet and 2 inches?

11. How many things in 9 dozen?

41. 1. There are 21 sheep in one field, 11 in another, and 22 in a third; how many in the three fields?

2. How many 2-dollar footballs cost 32 dollars?

3. There are 12 months in a year; how many in seven years?

4. A man spent $22 of $61; how much was left?

5. $11 taken from how much leaves $21?

6. Add 21, 22, 12, 212, 121, 212, 122 and 221.

7. Take 212 from 561. 8. Multiply 2122 by 6.

9. Divide 1352 by 2. 10. Find ½ of 1768 sheep.

42. 1. A has 21 horses and B has 22; how many have both?

2. At $21 each, how much will 9 plows cost?

3. In 212 quarts there are how many pints? (S. 9.)

4. What will 3 pianos cost at $220 each?

5. In 2 years there are 730 days; how many in 1 year?

6. Add 212, 1221, 222, 121, 211, 122 and 121.

7. Take 2121 from 7052. 8. Find 4 times 1222.

9. Find ½ of 3020 miles. 10. Divide 9371 by 2.

43. 1. A farmer sold 6 sheep at $2 each, and 10 pigs at $2 each; how much did he get for all?

2. How many pints are there in 21 quarts?

3. How many quarts are there in 21 pints?

4. John can walk 2 miles an hour; how far can he walk in 9 hours?

5. Add 212, 121, 22, 221, 2020, 1221 and 212.

6. From 3157 take 2212. 7. Multiply 1222 by 9.

8. Divide 7531 by 2. 9. Find ½ of 9307.

44. 1. Mary read 12 pages on Monday, 21 on Tuesday, 12 on Wednesday, and 22 on Thursday; how many in all?

2. A man having $91, spent $22; how much had he left?

3. There are 12 months in a year; how many in 9 years?

4. How many 2-cent pens can you buy for 15 cents?

5. How many times $2 are there in $75?

6. Divide 1576 by 2. 7. Multiply 1212 by 8.

8. Find ½ of 1795. 9. Divide 1947 by 2.

10. $121 are one half of how many dollars.

11. How many inches are there in 9 feet?

III. THE NUMBER THREE.

Addition.

Table.	Exercises.—			
1+3=	I.	II.	III.	IV.
2+3=	3	6	26	3
3+3=	4	13	15	2
4+3=	2	7	9	3
5+3=	5	12	20	2
6+3=	11	24	38	3
7+3=	13	17	19	1
8+3=	15	8	17	3
9+3=	12	32	24	3
10+3=	14	16	37	(?)

45. 1. Learn the Table to 5+3.

2. Copy column I., and add *three* to each number.

3. I have 5 tops and buy 3 more; how many have I?

4. Tom is 11 years old; how old will he be in 3 years more?

5. Add 212, 102, 2101, 212, 122, 2020, 121 and 222.

6. Multiply $221 by 7? 7. Find ½ of 125 pints.

8. How many inches in 6 feet? (See S. 4, 5 and 9.)

46. 1. Learn the table to 8+3.

2. Copy column II., and add *three* to each number.

3. There are 8 boys at play; 3 more join them; how many are there now?

4. There are 7 books on one shelf, 3 on another, and 3 on a third; how many are there in all?

5. Add 21, 122, 212, 121, 202, 120, 12, 22 and 121.

6. Multiply 1212 by 8. 7. Divide $64 by $2.

47. Learn the Table to 10+3.

2. Copy column III., and add *three* to each number.

3. Copy column IV.; add the column; say *one* at the bottom and add; say *two; three;* etc.

4. How many are $14 and $3? $14 and $13? 9+13?

5. Take 2102 from 3071. 6. Multiply 2122 by 9.

48. 1. John is 9 years old, and Mary is 3 years older; how old is Mary?

2. Tom had 15 cents, he earned 3 more and I gave him 3; how many had he then?

3. How many quarts in 17 pints?

4. Tom has $9, and Dick has $3; how much have both?

5. Add 31, 233, 113, 322, 23, 31, 103, 233 and 331.

6. Take 2212 from 2911. 7. Multiply 212 by 9.

8. At $2 each, how many lambs cost $112?

49. 1. A farmer sold 12 cows, and had 3 left; how many had he at first?

2. If you have 17 marbles, buy 3, find 3, then lose 2, how many will you have?

3. $13 are $3 less than how much?

4. What cost 7 pounds of butter at 12 cents a pound?

5. Add 313, 32, 223, 3202, 313, 232, 1323 and 332.

6. Take 2122 from 3070. 7. Find ½ of 1728.

8. How many inches in 9 feet. (S. 9.)

50. 1. How many are 19 cents, 2 cents and 13 cents?

2. A watch cost $35, a chain $3; what did both cost?

3. A boy earned $12 one month, and $13 the next; how much did he earn in the two months?

4. A man bought a plow for $30, and sold it at a gain of $13; how much did he get for it?

5. Find the sum of $231, $323, $1232, $323 and $32.

6. Multiply 2121 by 8. 7. Divide 5327 by 2.

8. What will 6 horses cost at $120 each?

51. 1. I sold a knife for 28 cents, which was 3 cents less than I paid for it; how much did it cost?

2. Add 12, 3, 2, 13 and 2 without writing the numbers.

3. A man having $320, sold a horse for $132, and a saddle for $23; how much had he then?

4. Take $2212 from $4071. 5. Multiply 2122 by 7.

6. Divide 323+132 by 2. 7. Find ½ of 179 pounds.

8. How many 2-cent pencils cost 60 cents?

9. $21 are one half of how much?

Subtraction.

Table.	Exercises.—			
	I.	II.	III.	IV.
3—3=	3	13	22	13
4—3=	5	10	22	17
5 - 3=	8	9	19	19
6—3=	4	18	21	22
7—3=	6	20	13	18
8—3=	7	17	23	15
9—3=	14	13	17	21
10—3=	17	30	21	32
11—3=	15	29	32	12
12—3=				

52. 1. Learn the Table to 8—3.

2. Copy column I.; take *three* from each number.

3. 7 pens are how many more than 3 pens?

4. If I earn $9 and spend $3, how much have I left?

5. A boy having 15 figs, ate 3; how many had he left?

6. On one page there are 33 lines, on another 32, on a third 33; how many in all?

7. $258 are $133 more than how much?

8. Take 323 from 528. 9. Find ½ of 5 times 21.

53. 1. Learn the Table to 10—3.

2. Copy column II.; take *three* from each number.

3. If a man earn $17, and spend $13 of the amount; how many dollars has he left?

4. From a basket containing 36 apples, 13 were taken; how many remained in the basket?

5. Add 32, 313, 322, 113, 323, 312, 33 and 232.

6. Take 3232 from 6150. 7. Multiply 2221 by 9.

54. 1. Learn the Table to 12—3.

2. Copy columns III. and IV.; take *three* from each number

3. 27 men are 13 more than how many?

4. Take 2323 from 4392. 5. Multiply ½ of 446 by 8

6. From 7020 take 3233. 7. Divide $725 by $2.

8. 13 bushels are 12 less than how many bushels?

9. Add 323, 331, 23, 332, 213, 32 and 333.

55. 1. Add 13, 23, 231, 233, 1312, 2333, 232 and 133.

2. Take 1323 from 2370.   3. Multiply 1212 by 7.
4. From 5022 take 2313.   5. Find ½ of 2712.
6. 9 times 2122 = ?   7. 2905 — 2332 = ?

8. A man sold 9 cows at $22 each, then paid $130 for a horse; how much had he left?

9. How many quarts are there in 39 pints?

10. What number put with 23 makes 51?

56. 1. I sold a kite for 28 cents, gaining 13 cents; how much did it cost?

2. If you earn 45 cents, spend 20 cents for a slate, and 13 cents for pencils, how much have you left?

3. From 3028 take 1323.   4. Multiply 2212 by 7.
5. Divide 3721 by 2.   6. Take 2333 from 6031.

7. $70 are $32 more than how much?

8. There were 23 pupils in a school after 13 went home, how many were there at first?

9. How many days in May, June and July?

57. 1. Add 1323, 231, 3323, 321, 1032, 231, 3213, 2303, 3323 and 1332.

2. Take $1323 from $2630.   3. Multiply 2212 by 6.
4. Find ½ of $1326.   5. From 7080 take 3033.

6. If a man earn $12 a week, how much will he earn in 9 weeks?

7. What cost 7 watches at $22 each?

8. If you have 35 cents, and buy 10 apples at 2 cents each, how much will you have left?

58. 1. Add 331, 23, 213, 312, 313, 320, 233 and 32.

2. Take 3320 from 6331.   3. Multiply 2122 by 8.
4. From $712 take $323.   5. Find ½ of 1105.

6. $220 are ½ of how many dollars?

7. There are 320 rods in a mile; how many rods in a mile and a half?

8. If I divide ½ of 72 marbles equally between 2 boys, how many will each have?

9. I have $23, how much must I get to make $45?

Multiplication.

Table.	**Exercises.—**			
1×3=	I.	II.	III.	IV.
2×3=	3	6	5	10
3×3=	2	8	9	20
4×3=	5	5	4	5
5×3=	6	7	7	15
6×3=	4	4	10	3
7×3=	1	8	6	13
8×3=	5	5	8	6
9×3=	3	7	3	16
10×3=	6	6	9	30

59. 1. Learn the Table to 6 × 3.

2. Copy column I.; multiply *three* by each number.

3. What cost 7 oranges at 3 cents each?

4. At $3 each, what will 5 sheep cost?

5. Add, 32, 313, 232, 312, 3023, 312 and 233.

6. Multiply 323 by 8. 7. Multiply 2313 by 6.

8. Take 1332 from 6×323. 9. Find ½ of 3×213.

60. 1. Learn the table to 8 × 3.

2. Copy column II.; Multiply *three* by each number.

3. How many feet in 7 yards? in 9 yards? (S. 9.)

4. If you read 23 pages each day, how many pages will you read in a week?

5. Add 321, 213, 33, 13, 202, 233, 32 and 133.

6. $13×4=? Make a problem for this example. (S. 14.)

7. How many are 7×3, +1? 8×3, +2?

8. Multiply 3233 by 7. 9. Multiply 3322 by 8.

61. Learn the table to 10×3.

2. Copy columns III. and IV.; multiply *three* by each number.

3. What cost 10 pencils at 3 cents each?

4. How many rods in 3 miles? in 7 miles?

5. Multiply 2323 by 9. 6. Multiply 2331 by 10. (S.14.)

7. $31×9=? Make a problem for this example.

8. Add 323, 1231, 3223, 1332, 223, 313 and 132.

9. What cost 6 horses at $130 each?

62. 1. How many sides have 7 triangles?

2. If 2 books cost $6, how much will 9 cost?

3. If I earn $70 in 2 weeks, how much in one week?

4. A man travels 13 miles an hour; how far will he travel in 8 hours?

5. Take 2313 from 7065. 6. Multiply 3232 by 9.

7. Multiply 2323 by 5; by 6. 8. Find ½ of 3 × 232.

9. Add 3032, 323, 2313, 332, 2311, 333, and 332.

63. 1. Add 1313, 2232, 3232, 313, 232, 1302, 302, 323, 2313, 320, 2323 and 1332.

2. Take 3231 from 7520. 3. Multiply 3233 by 10.

4. Multiply 3113 by 7. 5. Divide 17322 by 2.

6. A milkman sold 37 pints of milk; how many quarts did he sell?

7. Hal gathered 36 quarts of chestnuts; he sold half of them; how many had he left?

8. How many rods in 9 miles? In 10 miles?

64. 1. Add 323, 213, 332, 203, 322, 312, 203 and 332.

2. From 2318 take 1332. 3. Multiply 1323 by 7; by 9.

4. 32 bu. × 7 =? Make a problem for this example.

5. What number added to 131 gives 280?

6. How many inches tall is a boy 5 feet tall? (S. 9.)

7. How many 2-dollar hats cost $32?

8. A boy earned $31; he bought 7 sheep at $3 each; how much had he left?

65. 1. Add $23, $313, $32, $103, $330, $203, $321, $132, $133 and $332.

2. Take $3231 from $10211. 3. Multiply $3231 by 4.

4. Multiply 23302 by 9. 5. Find ½ of 2937.

6. There are 23 boys in one class, 31 in another, and in a third half as many as in both the others; how many in the third class? how many in all?

7. If you have 35 marbles, lose 13, and sell half of the remainder, how many will you have?

8. What will 7 horses cost at $132 each?

9. How many eggs in 10 dozen?

Division.

Tables.—			Exercises.—	
I.	II.	III.	I.	II.
3÷3=	1÷3=0, +1	$\frac{1}{3}$ of 1=$\frac{1}{3}$	6	3
6÷3=	2÷3=0, +2	$\frac{1}{3}$ of 2=$\frac{2}{3}$	12	4
9÷3=	3÷3=1	$\frac{1}{3}$ of 3=1	3	2
12÷3=	4÷3=1, +1	$\frac{1}{3}$ of 4=1$\frac{1}{3}$	9	5
15÷3=	5÷3=1, +2	$\frac{1}{3}$ of 5=1$\frac{2}{3}$	15	12
18÷3=	6÷3=2	$\frac{1}{3}$ of 6=2	24	9
21÷3=	7÷3=	$\frac{1}{3}$ of 7=	30	13
24÷3=	8÷3=	$\frac{1}{3}$ of 8=	21	10
27÷3=	Etc., to	Etc., to	27	14
30÷3=	30÷3=	$\frac{1}{3}$ of 30=	18	11

66. 1. Learn Table I.

2. Copy column I.; divide each number by *three;* find *one third* of each.

3. How many threes are there in 15? in 27?

4. $\frac{1}{3}$ of 12 oranges are how many? $\frac{1}{3}$ of 15 cents?

5. There are 27 blocks in three rows; how many in each?

6. How many yards in 33 feet? in 66 feet?

7. How many 3-cent pieces cost 36 cents?

67. 1. Learn Table II. to 15÷3; and Table III. to $\frac{1}{3}$ of 15.

2. Copy Column II.; divide each number by *three*; find *one third* of each.

3. If I have $12, how many 3-dollar books can I buy? If I have $13? If I have $14?

4. Find $\frac{1}{3}$ of 246. 5. Divide 189 by 3.

6. How many times $3 are there in $48?

7. How many yards are there in 135 feet?

68. 1. Learn Table II. to 24÷3, and Table III. to $\frac{1}{3}$ of 24.

2. Make a column like II., using no number greater than 24; divide each by *three;* find *one third* of each.

3. If I divide 18 marbles equally among some boys, giving each three, how many boys are there?

4. Find $\frac{1}{3}$ of 159. 5. Divide 612 by 3.

6. How many sheep, at $3 each, cost $54?

69. 1. Learn Table II. to 30÷3, and Table III. to ⅓ of 30.

2. Make a column like II., using no number greater than 30; divide each by *three;* find *one third* of each.

3. At 3 cents each, how many papers will 30 cents buy?

4. Divide 237 by 3. 5. Find ⅓ of 928.

6. A boy bought 36 marbles, and lost ⅓ of them; how many did he lose? how many had he left?

7. Sold 9 pigs at $2 each, and with the money bought sheep at $3 each; how many did I get?

70. 1. 3 coats cost $24; what did each cost?

2. What cost 9 chairs at $3 each; at $13 each?

3. Add 233, 312, 232, 133, 3213, 302, 133 and 332.

4. Take 2332 from 7035. 5. Multiply 3233 by 9.

6. Divide 7236 by 3. 7. Find ⅓ of 1743.

8. Paid out ⅓ of $69; how much had I left?

9. A sold a horse for $230, and a cow for $31; he paid ⅓ of the money for a wagon; find the cost.

71. 1. A boy having $30, paid ⅓ of it for a saddle; how much had he left?

2. How many yards are there in 260 feet?

3. Add 323, 3211, 2303, 232, 832, 2323 and 232.

4. Take 3232 from 4017. 5. Multiply 3232 by 8.

6. Divide 1736 by 3. 7. Find ⅓ of 7134.

8. John bought 23 chickens; he raised 13 more, then the rats carried off ⅓ of all he had; how many were left?

9. What will 7 organs cost at $230 each.

72. 1. Add 323, 3131, 3223, 3003, 2203, 311, 2322, 2323, 313 and 3132.

2. Take 13233 from 18115. 3. Multiply 3233 by 7.

4. Find ⅓ of 5231. 5. Divide 7396 by 3.

6. Paid 75 cents for 3 books; how much did each cost?

7. How much are 3 cows worth, at $32 each?

8. I paid out $312 and have $132 left; how much had I at first?

9. What number multiplied by 3 gives 51?

10. How many 3-dollar hats cost $66?

73. 1. Add 2031, 323, 1231, 312, 2032, 323, 231, 3213, 123, 2323 and 232.

2. Take 3233 from 3721. 3. Multiply 3231 by 9.

4. Divide 11253 by 3. 5. Find $\frac{1}{3}$ of 1937 bu.

6. A boy had 23 marbles; he bought 12, and I gave him 13 more; how many had he then?

7. What cost 10 yards of cloth at $3 a yard?

8. A farmer having 230 sheep, bought 132 more, then sold half of all he had; how many had he left?

74. 1. Add 321, 213, 1312, 223, 32, 232, 133, 213, 1030, 2333 and 1332.

2. Find $\frac{1}{3}$ of 827. 3. Multiply $\frac{1}{3}$ of 9669 by 10.

4. How many days in March, April, May and July?

5. What amount added to $23 gives $51?

6. 20 things make a score; how many in 3 score?

7. What cost 7 horses at $330 each?

8. A boy earned $13 a month for 7 months; how much had he left after spending $32?

75. 1. Add 13, 23, 313, 32, 223, 332, 123, 33 and 32.

2. $\frac{1}{3}$ of 3578=? 3. Multiply 3132 by 7.

4. What cost 10 horses at $132 each? (S. 14.)

5. There were 13 boys in a room, 23 more came in, then 32 went home; how many were left?

6. A farmer sold 320 bushels of oats, which was $\frac{1}{3}$ of his crop; how many bushels had he at first?

7. How many yards are there in 190 feet?

8. Take 4893, ÷3, —233; how many are left?

76. 1. Add 33, 212, 32, 3302, 313, 23, 332 and 233.

2. Find 9 times 3233. 3. Divide 17323 by 3.

4. How many boxes will hold 117 pounds of candy, if 3 pounds are put in each box?

5. What number taken from 270 leaves 133?

6. $212 are $\frac{1}{3}$ of how much?

7. What 3 equal numbers make 72?

8. What is the average price, if 3 stoves cost $81?

9. Find $\frac{1}{3}$ of the sum of 231 and 323.

77. 1. Add 231, 313, 2303, 3032, 3132, 203, 3131, 213, 3231, 323 and 2332.

2. From 12370 take 3323. 3. Multiply 13132 by 7.

4. Divide 27123 by 3. 4. Find $\frac{1}{2}$ of $\frac{1}{3}$ of 2931.

6. $320 taken from how much leaves $133?

7. Mr. Ray sold 9 cows at $32 each, then out of the money paid $130 for a horse; how much was left?

8. How many quarts in 112 pints of milk? what is it worth at 5 cents a pint? (S. 9.)

78. 1. Add 1331, 323, 213, 3232, 320, 23, 332, 232, 1320, 233 and 332.

2. From 8028 take 3033. 3. Multiply 3233 by 9.

4. Divide 37123 by 3. 5. Find $\frac{1}{3}$ of 13712.

6. If a man earn $26 a week, and spend $13 a week, how much may he save in ten weeks?

7. There were 32 pupils in a room after 13 were sent home; how many were there at first?

8. John sold his pony for $51, gaining $13, find the cost.

79. 1. Add 1323, 331, 233, 32, 1031, 232, 3213 and 132.

2. From 7715 take 3331. 3. Multiply 33123 by 8.

4. Divide 13731 by 3. 5. Find $\frac{1}{3}$ of 22725.

6. If you have $1, spend 20 cents for a slate, and 13 cents for other things, how much have you left?

7. What will 7 watches cost at $32 each?

8. $70 are $32 more than how much?

80. 1. Add *threes* to 1 to 49; to 2 to 50; to 3 to 51.

2. Add 13, 23, 32, 131, 23, 33, 13, 31, 33 and 32.

3. From 16320 take 13231. 4. Multiply 23323 by 6.

5. Take $3233 from $7120. 6. Find $\frac{1}{3}$ of 8356 bu.

7. If a drover having 64 mules, sells 32, then buys 23; how many will he have?

8. Three men gain in trade $5823, which they share equally how much has each?

9. 5280 feet make 1 mile; how many yards in a mile?

10. 46 feet are 3 times how many feet?

11. What will 10 barrels of pork cost at $13 a barrel?

IV. THE NUMBER FOUR.

Addition.

Table.	Exercises.—			
1+4=	I.	II.	III.	IV.
2+4=	1	6	9	4
3+4=	3	8	19	3
4+4=	5	13	10	4
5+4=	2	7	20	2
6+4=	4	11	29	4
7+4=	12	15	26	4
8+4=	15	18	18	3
9+4=	12	14	28	4
10+4=	14	17	39	(?)

81. 1. Learn the Table to 5+4.

2. Copy column I.; add *four* to each number.

3. I paid $15 for a coat and $4 for a hat; how much did both cost?

4. Add 24, 11 and 14, then find $\frac{1}{3}$ of the sum.

5. If you buy 12 pencils, and find 4, how many have you?

6. What cost 7 acres of land at $33 per acre?

7. Take 2332 from 4305. 8. Find $\frac{1}{5}$ of $850.

82. 1. Learn the Table to 8+4.

2. Copy column II.; add *four* to each number.

3. What cost a dress at $18, and a bonnet at $4?

4. How many are 28 cents and 4 cents? $11 and $4?

5. Divide 513 bu. by 3 bu. 6. Find $\frac{1}{3}$ of 7×$23.

7. Take 3233 from the sum of 4143 and 2444.

83. 1. Learn the Table to 10+4.

2. Copy column III.; add *four* to each number.

3. Copy column IV.; add the column; say *one* and add; say *two*; say *three*, etc.

4. From 8132 take 3233. 5. Multiply 3231 by 9.

6. How many yards in 19 feet? in 108 feet?

7. What cost 8 pounds of butter at 33 cents a pound?

8. Count by *fours* from 1 to 49; 2 to 50; 3 to 51.

84. 1. I have 10 cents, John has 14 cents, and Tom has 4 cents; how much have we all?

2. May is 7 years old, how old will she be in 4 years more? in 14 years more?

3. There are 19 pupils in one class and 4 in another; how many in both classes?

4. A boy bought 5 oranges at 3 cents each and had 4 cents left; how much had he at first?

5. Add 414, 343, 244, 413, 4441, 344 and 443.

6. Multiply 323 by 9.   7. Take 3233 from 4080.

8. Divide $732 by $3.   9. Find ⅓ of 7326.

10. Count by *fours* from 3 to 63.

85. 1. A boy who had $29 earned $4 more; how much had he then?

2. Tom has 12 marbles, Will has ⅓ as many; how many have both?

3. There are 9 boys in a class after 4 went home; how many were there at first?

4. Add $224, $314, $243, $4324, $342 and $234.

5. A man paid $44 for a horse and $34 for a cow; how much did both cost?

6. $43 taken from how much leaves $14?

7. From 71340 take 3323.   8. Multiply 3032 by 7.

9. Divide 2032 by 3.   10. Find ⅓ of 2326.

86. 1. A milkman sold 13 quarts of milk to one lady, and 14 quarts to another; how much to both?

2. I traveled 9 miles westward and 14 miles southward; how far did I travel in all?

3. 12 bushels, 4 bushels and 4 bushels are how many?

4. Paid 30 cents for butter and 14 cents for lard; how much was paid for both?

5. Add 241, 34, 423, 42, 34, 414, and 343.

7. Add $43, $24 and $44, then take away $104.

8. How many yards are there in 84 feet?

9. $22 are one third of how much?

10. At $30 each, what cost 4 overcoats?

87. 1. Add 34, 443, 324, 42, 114, 340, 413, 34 and 43.

2. $324 taken from what amount leaves $143?

3. 9 knives cost how much at 33 cents each?

4. At $3 each, how many sheep cost $93.

5. 3233 × 4 =? 6. Find $\frac{1}{3}$ of 17326.

7. $231 are $143 more than how much?

8. Divide $51 by $3. Make a problem.

9. If you earn $48, then spend $\frac{1}{3}$ of it, how much will you have left?

88. 1. Add 24 bu., 34 bu., 242 bu., 134 bu., 43 bu. and 142 bu.

2. If you earn $15 a month, and spend $12 a month, in how many months can you save $40?

3. Take 3232 from 4231. 4. Find $\frac{1}{3}$ of $\frac{1}{2}$ of 296.

5. If you take from 87 cents $\frac{1}{3}$ of the amount, how much will be left? Make a problem for this example.

6. Tom has $14, Dick has $22, and Harry has half as much as both the others; how much have they all?

7. Multiply $323 by 9. 8. Divide 14317 by 3.

89. 1. Add 432, 1344, 414, 243, 324, 403, 1342, 304, 2432, 144 and 443.

2. From $732 take $323. 3. Multiply 1323 by 7.

4. Divide 2332 by 3. 5. Find $\frac{1}{3}$ of 7920 feet.

6. If 3 fans cost 90 cents what will 2 cost?

7. $\frac{1}{3}$ of my money is $32; how much have I?

8. Three boys have 43 quarts of nuts; they gather 32 quarts more; then share them all equally; how many has each?

90. 1. Add 432, 243, 324, 240, 1024, 411, 314 and 1443.

2. From 1740 take 1333. 3. Multiply 3230 by 8.

4. Find $\frac{1}{3}$ of $7625. 4. Divide $7325 by $3.

6. There are 41 pupils in one room, 34 in another, and 43 in a third; if they are all divided into 2 equal classes, how many will there be in each class?

7. 2 pounds of butter cost 44 cents, what cost 3 pounds?

8. How many yards in 196 feet?

9. How many times $3 in $108? Make a problem.

10. How many pints in 18 quarts?

Subtraction.

Table.	Exercises.—			
4—4=	I.	II.	III	IV.
5—4=	8	10	13	27
6—4=	4	20	11	11
7—4=	6	9	21	22
8—4=	7	11	9	12
9—4=	5	21	12	16
10—4=	14	19	22	31
11—4=	18	29	33	29
12—4=	17	31	17	41
13—4=	27	18	23	13

91. 1. Learn the Table to 8—4.

2. Copy column I.; take *four* from each number.

3. From a class of 8 boys, four are sent home; how many remain?

4. 7 cents are how many more than 4 cents?

5. If you take $4 from $17, how much is left?

6. Add 343, 214, 34, 142, 324, 44, 441 and 243.

7. Multiply $\frac{1}{2}$ of 464 by 3. 8. Take 344 from 586.

92. 1. Learn the Table to 11—4.

2. Copy column II.; take *four* from each number.

3. If you have 11 chickens, and sell 4, how many are left?

4. Joe is 10 years old; how old was he 4 years ago?

5. Add 34, 214, 143, 342, 124, 41, 241 and 443.

6. Take 343 from 414. 7. Take 414 from $\frac{1}{2}$ of 982.

8. What will 3 carriages cost at $230 each?

93. 1. Learn the Table to 13—4.

2. Copy columns III. and IV.; take *four* from each number.

3. 4 of Tom's 13 chickens died; how many had he left?

4. If you buy 12 marbles, give 4 away, and I give you 3, how many will you have?

5. Add 3042, 413, 304, 243, 134, 344 and 442.

6. Take 4143 from 7024. 7. Multiply 3232 by 7.

8. Add 434 to $\frac{1}{3}$ of 1362. 9. Take 443 from 1171.

10. How many feet in 120 yards?

94. 1. 4 apples and how many more make 13 apples?

2. Mary is 11 years old; how old was she 4 years ago?

3. 4 boys left a group of 21 boys; how many remained?

4. John has 14 marbles, and George has 4 less than John; how many have both?

5. 14 feet are how many less than 29 feet?

6. There are 73 pupils in a school, 44 of them are boys: how many girls are there?

7. I exchanged a horse worth $90 for a watch and $45 in money; how much did the watch cost?

8. Add 424, 340, 314, 4433, 342, 214 and 343.

9. Take $344 from $721. 10. From 1041 take 434.

95. 1. A boy having 18 chickens sold 14 of them; how many had he left?

2. 31 less 4 are how many? 27—10=? 31—14=?

3. If you buy a book for 25 cents and sell it for 14 cents, how much do you lose?

4. $37 are $14 more than how much?

5. How much will 7 readers cost at 30 cents each?

6. From a chest containing 83 pounds of tea, a grocer sold 44 pounds; how many pounds were left?

7. How many yards are there in 111 feet?

8. How many feet are there in 111 yards?

9. Take 4342 from 5107. 10. Multiply 3203 by 8.

96. 1. How much added to 24 will make 31?

2. 32 feet are 14 feet more than how many feet?

3. How many pints in 14 quarts?

4. How many inches in 4 feet?

5. Add 2403, 443, 314, 4242, 413, 343, 404, 3442, 324, 432 and 3244.

6. A man sold 8 sheep at $3 each, then paid out $14 of the money; how much had he left?

7. I sold a horse for $70 gaining $24; how much did it cost?

8. What 3 equal numbers make 72?

9. Take $344 from $526. 10. Multiply 3233 by 7.

11. Subtract *fours* from 50 to 2; from 49 to 1.

97. 1. Add 314, 3024, 413, 344, 241, 342 and 44.

2. Take 3443 from 5024. 3. Multiply 3233 by 6.

4. From 5025 take 4343. 5. Find ⅓ of 10325.

6. A has 323 sheep, B has 403, C has ⅓ as many as A and B together; how many have they all?

7. What cost 3 horses at $140 each, and 7 mules at $320 each?

8. How many rods in 7 miles?

9. There are 138 pupils in 3 rooms; how many in each?

10. How many yards in 7000 feet?

98. 1. Add 43, 424, 343, 224, 3041, 434 and 342.

2. From 7282 take 3434. 3. Multiply 3323 by 9.

4. Take 3404 from 4701. 5. Divide 13435 by 3.

6. From a chest containing 92 pounds of tea, 44 pounds were sold; how much remained in the chest?

7. How much must be added to $443 to make $500?

8. How many yards in 48 feet? in 5280 feet?

9. A man paid out $412, and had $443 left, how much had he at first?

99. 1. Add 3024, 433, 343, 224 , 413, 344 and 143.

2. Take 3442 from 9234. 3. Multiply $3032 by 7.

4. From 7010 take 4043. 5. Find ⅓ of 8415.

6. Mary having 45 cents, spent 14 cents one day and 23 cents the next; how much had she left?

7. I bought a horse for $1150, and sold it for $240 less; how much did I get for it?

8. $413 + $234, — $344 = ? 9. 3 times ⅓ of 466 = ?

10. 7 times $13 are how many times $3?

100. 1. Add 34, 104, 4243, 344, 214, 403 and 344.

2. Take 4043 from 5280. 3. Multiply 2333 by 8.

4. $17350 — $13244 = ? 5. Find ⅓ of 2×323.

6. What cost 8 pianos at $320 each?

7. How many $3 hats cost $57?

8. Two men start from the same place, and travel in the same direction; one travels 4 miles an hour, the other 7 miles; how far apart are they in 9 hours?

9. Count off *fours* from 51 to 3; from 50 to 2; from 49 to 1.

Multiplication.

Table.	Exercises. —			
	I.	II.	III.	IV.
1×4=	4	8	9	10
2×4=	2	5	10	20
3×4=	5	9	5	30
4×4=	3	7	7	5
5×4=	6	4	3	10
6×4=	2	9	8	15
7×4=	5	3	6	7
8×4=	3	6	9	17
9×4=	6	8	4	22
10×4=				

101. 1. Learn the Table to 6×4.
2. Copy column I.; multiply *four* by each number.
3. What cost 5 pencils at 4 cents each?
4. How many quarters in 6 yards?
5. Multiply 34 by 5. 6. Multiply 344 by 4.
7. Add ⅓ of 1002 and ½ of 468.

102. 1. Learn the Table to 8×4.
2. Copy column II.; multiply *four* by each number.
3. What cost 8 chairs at $4 each?
4. What cost 7 sheep at $4 each? 4 at $7 each?
5. $24×8=? Make a problem for this example.
6. Find ⅓ of 7 times $42. 7. Take 4344 from 9028.
8. How many hours in a week?

103. 1. Learn the Table to 10×4.
2. Copy columns III. and IV.; multiply *four* by each number.
3. What cost 8 sheep at $4 each, and a horse at $124?
4. How many quarts will a 9-gallon can hold?
5. Add 413, 3044, 434, 214, 342, 34 and 443.
6. Multiply $414 by 9. 7. Take ⅓ of 426 from 414.
8. What number added to 404 gives 611?
9. How many quarts in 14 gallons?
10. If 3 books cost $12, what will 9 cost?
11. How many hours in a day and a half?
12. What cost 10 horses at $140 each?

104. 1. Add 34, 43, 224, 141, 234, 42, 144 and 443.

2. From 7500 take 3444. 3. Multiply 4342 by 9.

4. Multiply 4243 by 5; by 6. 5. Find ⅓ of ½ of 6750.

6. How many sides have 9 squares? 12 squares?

7. How many quarts in 10 gallons?

8. How much is left, if 243 be taken from 510?

9. How many yards in 500 feet?

10. There are 144 square inches in a square foot; how many square inches in 7 square feet?

105. 1. Add 14134, 3443, 4041, 3432, 11344, 4321, 4244, 3434, 14342, 34434 and 4043.

2. 324 is ⅓ of what number? 3. Multiply 4342 by 7.

4. Find ⅓ of of 11523. 5. Take 4344 from 11434.

6. If you have 80 cents, how many 3-cent pencils can you buy? If you have 95 cents?

7. What cost 6 pounds of butter at 24 cents a pound, and 10 dozen eggs at 14 cents a dozen?

8. How many hours in 5 days and 14 hours?

106. 1. Add 4311, 2434, 14304, 3243, 4241, 3412, 11344, 4224, 13424 and 24343.

2. From 9004 take 3443. 3. Multiply 4414 by 7.

4. Multiply 14343 by 9. 5. Find ⅓ of 70103.

6. How many rods in 8 miles?

7. How many are 7 times 4? 7 times 40? 7×400?

8. How many are 10 times 10? 10 times 4? 10×14?

10. A man bought 9 cows at $42 each, and paid down $240; how much did he still owe for them?

107. 1 Add 34, 43, 32, 44, 24, 243, 134 and 243.

2. From 8524 take 3443. 3. Multiply 4343 by 4; by 8.

4. Multiply 34434 by 9. 5. Find ½ of 17032.

6. If 3 books cost 66 cents, what will 4 cost?

7. How many square inches in 9 square feet?

8. At $3 a pair, what cost 2 dozen pairs of shoes?

9. How many pecks in 8 bushels?

10. What cost 3 gallons of cherries at 10 cents a quart?

11. How many sheets of paper in 7 quires?

108. 1. Add 240, 343, 24, 114, 43, 134, 414 and 243.

2. Take 2443 from 4017. 3. Multiply $4434 by 8.

4. Find ⅓ of 7073 bu. 5. Divide 9341 by 3.

6. 78 feet are how much more than 14 yards?

7. $24 are ¼ of how much? 8. Find ⅓ of $42; ⅔ of 42.

9. A man sold a horse for $144, and 6 colts at $24 each; how much did he get for them all?

10. How many rods in 7 miles and 134 rods?

109. 1. Add 342, 214, 434, 143, 233, 442, 434 and 43.

2. From 7348 take 4243. 3. Take 4334 from 6283.

4. How do you multiply a number by 10? $334×10=?

5. Divide $123 by 3. Make a problem.

6. If a man build 3 rods of fence in a day, how long will it take him to build 55 rods?

7. 32 is ⅓ of what number? 8. Find ⅓ of ½ of 1728.

9. What number taken from 516 leaves 342?

110. 1. Add 434, 4342, 314, 432, 243, 414 and 4433.

2. Multiply 4342 by 9; by 7. 3. Find ¼ of 9142 feet.

4. How many quarts are there in 142 gallons?

5. 24 sheets of paper make one quire; how many in 10 quires?

6. If 4 men build a wall in 5 days, how long should it take one man? two men?

7. A farmer had $517; after paying $144 each for three wagons, how much had he then?

8. What cost 7 organs at $240 each?

9. $34×5=? Make a problem for this example.

111. 1. Add 3423, 344, 234, 443, 342, 434 and 43.

2. Multiply 43443 by 7. 3. Find ⅓ of 365 days.

4. Multiply 4343 by 9. 5. Take ⅓ of 726 from 410.

6. A sold a house for $3420, and 7 acres of land at $32 per acre; how much did he get for all?

7. A man saves $34 a month; how much in 10 months?

8. John had $43, sold a pony for $24, earned $23, then paid $34 for a suit of clothes; how much had he left?

9. How much taken from $725 leaves $344?

10. How many rods in 9 miles?

Division.

Tables.—			**Exercises.—**	
I.	II.	III.	I.	II.
4÷4=	1÷4=0, +1	¼ of 1=¼	4	7
8÷4=	2÷4=0, +2	¼ of 2=½	16	9
12÷4=	3÷4=0, +3	¼ of 3=¾	8	6
16÷4=	4÷4=1	¼ of 4=1	12	8
20÷4=	5÷4=	¼ of 5=	20	13
24÷4=	6÷4=	¼ of 6=	32	12
28÷4=	7÷4=	¼ of 7=	40	15
32÷4=	8÷4=	¼ of 8÷	28	17
36÷4=	Etc., to	Etc., to	36	14
40÷4=	40÷4=	¼ of 40=	24	18

112. 1. Learn Table I.

2. Copy column I.; divide each number by *four;* find *one fourth* of each.

3. How many *fours* are there in 16? in 32? in 24?

4. At 4 cents each, how many oranges cost 40 cents?

5. How many gallons are there in 28 quarts? 44 quarts?

6. How many bushels in 20 pecks? in 36 pecks?

7. If 3 clocks cost $12, how much will 7 cost?

113. 1. Learn Table II. to 20÷4, and Table III. to ¼ of 20.

2. Copy column II.; divide each number by *four;* find *one fourth* of each?

3. I have $15; how many 4-dollar books can I buy?

4. How many gallons in 14 quarts? in 19 quarts?

5. I paid $18 for 4 lamps; what did each cost?

6. I paid $11 for cloth at $4 a yard; how many yards did I buy?

7. How many rods in 7 miles and 244 rods?

114. 1. Learn Table II. to 32÷4, and Table III. to ¼ of 32.

2. Make a column III., using no number greater than 32; divide each by *four;* find *one fourth* of each.

3. How many 4-foot strings will a 30-foot cord make?

4. How many pencils, at 4 cents each, cost 40 cents?

5. If I spend ¼ of $48, how much of it is left?

6. Take 4343 from 7082. 7. Divide 2728 by 4.

115. 1. Learn Table II. to 40÷4, and Table III. to $\frac{1}{4}$ of 40.

2. Make a column like II., using no number greater than 40; divide each by *four;* find *one fourth* of each.

3. How many 4-dollar stoves will $75 pay for?

4. How many pecks in 10 bushels? in 40 bushels?

5. A farmer having 148 sheep, sold 34, and afterwards bought 42; how many had he then?

6. Write the numbers from 20 to 24, 30 to 34, and 40 to 44 in a column and add them.

116. 1. Add 2432, 3442, 344, 2342, 2343, 3424, 1243, 41443, 4334 and 2443.

2. From 7340 take 3443. 3. Multiply 4344 by 9.
4. Divide $1744 by $4. 5. Find $\frac{1}{4}$ of 14320.

6. How many quarts are there in 14 gallons?

7. At $4 each, what cost 10 desks? 8 desks? 18 desks?

8. John picked 6 gallons of currants, which he sold at 8 cents a pint; how much did he get for them?

9. What number added to 244 gives 529?

117. 1. Add 424, 1104, 2434, 340, 10423, 4344, 12041, 3234, 22443 and 1324.

2. From 12145 take 4344. 3. Multiply 13443 by 7.
4. Divide 17563 by 4. 5. Find $\frac{1}{4}$ of $\frac{1}{3}$ of 9306.

6. How many hours in 9 days and 4 hours?

7. 9 square feet make a square yard; how many square inches in a square yard?

8. What cost 9 dozen eggs, at 24 cents a dozen?

9. How many 4-dollar hats cost $68?

118. 1. Add 243, 342, 141, 214, 443, 244 and 343.

2. Take 4414 from 7101. 3. Divide 11407 by 4.
4. Find $\frac{1}{3}$ of $\frac{1}{4}$ of 1944. 5. Multiply 4144 by 9.

6. What cost 9 horses at $140 a head?

7. 243 taken from what number leaves 224?

8. How many gallons in 149 quarts?

9. I sold 14 marbles to Tom, 23 to Harry, and have 34 left; how many had I at first?

10. How many inches in 7 feet and 4 inches?

119. 1. Add 4013, 3004, 4413, 344, 243, 844 and 43.

2. Multiply 44342 by 6. 3. Take 4342 from 7016.

4. Divide 11411 by 4. 5. Find $\frac{1}{4}$ of 9437.

6. A watch cost $132; the chain cost $\frac{1}{3}$ as much; find the cost of the chain; of both.

7. What cost 6 horses at $240 each, 7 mules at $132 each, and 4 cows at $31 each?

8. How many gallons in 90 pints? in 106 pints?

9. Find $\frac{3}{4}$ of $48. Make a problem.

120. 1. Add 404, 343, 214, 4314, 343, 24 and 443.

2. Take $4304 from $8250. 3. Multiply $4344 by 7.

4. How many bushels in 112 pecks?

5. How many 4-dollar coats cost $168?

6. Tom raised 28 chickens; after the rats carried off half of them, he bought 24; how many had he then?

7. Sold a watch for $42, losing $24; find the cost.

8. $\frac{1}{4}$ of my money is $14; how much have I?

9. 22 bushels are $\frac{2}{3}$ of how many bushels?

121. 1. Add 3042, 4324, 1434, 3442, 4324, 343, 4440, 1324, 14344 and 4343.

2. Take 4404 from 7382. 3. Multiply 44344 by 8.

4. Divide 28306 by 4. 5. Find $\frac{3}{4}$ of 572 feet.

6. If I have $576, and spend $\frac{1}{4}$ of it, how much will I have left?

7. I paid $132 for sheep at $4 a head; how many did I buy?

8. What cost 8 pounds of tea at 24 cents a pound?

9. If a drover having 444 sheep, sells 214, then buys 432, how many will he have?

122. 1. Add 342, 413, 344, 241, 442, 244 and 343.

2. Take 4443 from 11328. 3. Multiply 24043 by 9.

4. Divide 19523 by 4. 5. Find $\frac{1}{4}$ of $19360.

6. What cost 7 acres of land at $34 an acre?

7. If a man sell a horse for $240, and a cow for $34, how much will he have left after spending $143?

8. If 4 knives cost 96 cents, what will 9 cost?

9. How many 4-dollar lamps will $85 buy?

10. $24 are $\frac{1}{4}$ of how many dollars?

V. THE NUMBER FIVE.

Addition.

Table.	**Exercises. —**			
1+5=	I.	II.	III.	IV.
2+5=	1	6	9	5
3+5=	3	8	16	4
4+5=	5	11	27	5
5+5=	2	14	13	3
6+5=	4	7	17	5
7+5=	11	17	19	2
8+5=	14	15	29	5
9+5=	12	21	8	5
10+5=	13	18	36	(?)

123. 1. Learn the Table to 5+5.

2. Copy column I.; add *five* to each number.

3. How many are 12 dollars and 5 dollars? \$14+\$5.

4. A boy paid 17 cents for a slate, and 5 cents for a sponge; how much for both?

5. Add 304, 1443, 1424, 243, 314, 434 and 4443.

6. How many gallons in 176 quarts?

7. Take 4034 from 4742. 8. Multiply 4324 by 7.

124. 1. Learn the Table to 8+5.

2. Copy column II.; add *five* to each number.

3. If a dozen eggs cost 18 cents, and a bunch of lettuce 5 cents, how much do both cost?

4. How many are 26 bushels and 5 busbels? 17+5?

5. Sold a watch for \$16, losing \$5; find the cost?

6. Find ¼ of \$75. 7. \$24 are ¼ of how much?

125. 1. Learn the Table to 10+5.

2. Copy column III.; add *five* to each number.

3. Add column IV.; say *one* and add; *two; three*, etc.

4. How many inches in 4 feet and 5 inches?

5. A farmer sold 12 tons of hay to one man, 5 to another, and 5 to a third; how many tons in all?

6. Multiply 3424 by 9. 7. Divide 3927 by 4.

126. 1. Count by *fives* from 3 to 53.

2. If you have 16 cents and earn 5 more, how many will you have then?

3. 17 bushels are 5 bushels less than how many?

4. Sam was 9 years old 5 years ago, how old now?

5. Add 51, 35, 254, 515, 53, 545, 53 and 545.

6. How many gallons in 275 quarts of milk?

7. From 7041 take 4344. 8. Multiply 4342 by 9.

9. Divide 7140 by 4. 10. Find ¼ of $7156.

127. 1. Count by fives from 4 to 54.

2. If you read 14 pages one day, and 15 the next; how many will you read in the two days?

3. What cost 5 watch chains at $4 each?

4. Sold a pony for $40, losing $15; find the cost.

5. I have $24 more than enough to buy a watch worth $35; how much have I?

6. Multiply 4342 by 8. 7. Take 3442 from 5041.

8. Divide 11542 by 4. 9. Find ¼ of 5338.

128. 1. Count by *fives* from 1 to 56.

2. There are 19 books on one shelf, 15 on another and 5 on a third; how many on the three shelves?

3. Joe has 15 pigeons and Rob has ⅓ as many; how many have they both?

4. What cost 8 pounds of butter at 42 cents a pound?

5. Add 535, 254, 513, 3454, 5445, 553 and 455.

6. From 8351 take 4344. 7. Multiply 4304 by 7.

8. Divide 41354 by 4. 9. Find ¼ of 2732.

129. 1. Count by *fives* from 2 to 57.

2. What cost a dozen eggs at 18 cents, and a pound of butter at 15 cents?

3. How many are $19 and $10? $19+$20? $19+$25.

4. 74 are 55 less than how many?

5. Add 445, 355, 543, 354, 5455 and 543.

6. Take $4343 from $6017. 7. Multiply $4344 by 9.

8. Divide 5347 by 4. 9. Find ¼ of 14372.

10. Add 355, 54, 345, 5453, 545 and 554.

130. 1. Add 525, 3451, 4535, 3450, 254, 515 and 455.

2. From 73415 take 43441.   3. Multiply 4344 by 7.

4. Divide 17304 by 4.   5. Find ¼ of 50401.

6. 144 sheep strayed from a flock of 750; how many remained in the flock?

7. 5280 feet make 1 mile; how many yards in a mile?

8. A farmer sold five lots of wheat; in the first there were 250 bu., in the second 350 bu., in the third 440 bu., in the fourth 325 bu., in the fifth half as many as in the first two lots; how many bushels did he sell?

131. 1. Add 5052, 1524, 25451, 4545, 3450, 5025, 14503, 2451, 10450 and 15545.

2. Take 3344 from 11215.   3. 5 times 4344=?

4. Find ¼ of 1907 gallons.   5. Divide $1793 by $4.

6. If 4 books cost $16, how much will 7 cost?

7. If 4 men build a wall in 12 days, how long should it take one man? 3 men?

8. Find ¾ of 56 quarts.   9. $42 are ¼ of how much?

132. 1. Add 525, 315, 453, 45, 551, 445, 55 and 254.

2. From 6132 take 4344.   3. Multiply 4341 by 8.

4. Divide 17354 by 4.   5. Find ¼ of ⅓ of 9276.

6. A man paid $124 for a carriage, and 4 times as much for a horse; how much did both cost?

7. In one carpet there are 154 yards, in another 153 yards, in a third 135 yards; how much in all?

8. At $43 each, what cost 8 sewing-machines?

9. Find ⅔ of $42. Make a problem for this example.

133. 1. Add 5254, 545, 1455, 504, 352, 1545, 1455, 454, 1543, 4555, and 3453.

2. From 11253 take 4344.   3. Multiply 3434 by 9.

4. Divide 11247 by 4.   5. Find ⅓ of ¼ of 7548.

6. How many hours in a week and one day?

7. How many gallons in 98 quarts? in 118 pints?

8. A farm which cost $17200, sold for $14440; find the loss.

9. What cost 9 wagons at $240 each?

10. Nine times $4 are how many times $3?

Subtraction.

Table.	**Exercises. —**			
5—5=	I.	II.	III.	IV.
6—5=	5	10	13	19
7—5=	9	12	23	23
8—5=	6	18	14	11
9—5=	8	11	34	17
10—5=	18	21	20	12
11—5=	7	32	31	14
12—5=	17	16	22	43
13—5=	16	21	18	24
14—5=	19	19	33	21

134. 1. Learn the Table to 9—5.

2. Copy column I.; take *five* from each number.

3. If you earn $16, and spend $5, how much have you?

4. John had 14 marbles left after losing 5; how many at first?

5. Add 453, 535, 315, 524, 453, 245 and 554.

6. Take 535 from 739. 7. Multiply $434 by 10; by 9.

8. From 1193 take 454. 9. Find $\frac{1}{4}$ of 9327.

135. 1. Learn the Table to 12—5.

2. Copy column II.; take *five* from each number.

3. Joe is 12 years old; how old was he 5 years ago?

4 How many are $21—$5? $21—$15?

5. Add 54 bu., 35 bu., 44 bu., 53 bu., 45 bu., and 54 bu.

6. From 762 take 535. 7. Multiply $344 by 8; by 7.

8. Take 4455 from 8161. 9. Divide 2763 by 4.

10. What cost 3 cows, if four cost $168?

136. 1. Learn the Table to 14—5.

2. Copy columns III. and IV.; take *five* from each number.

3. I have $15; how much do I lack of having $24?

4. Add 535, 1453, 5455, 1523, 455, 535 and 453.

5. Take $545 from $914. 6. Multiply 4424 by 6.

7. From 7238 take 5453. 8. Find $\frac{1}{4}$ of $\frac{1}{3}$ of 7350.

9. How many rods in 7 miles and 240 rods?

10. How much added to 5453 gives 900?

137. 1. Count by *fives* from 51 to 1.

2. If you spend $5 from $22, how much is left?

3. A boy having $15, lacks how much of having enough to buy a suit of clothes costing $28?

4. How much must be added to 45 to make 123?

5. What cost 7 saddles at $24 each?

6. Add 545, 355, 5453, 545, 4545 and 5554.

7. From $4355 take $3545. 8. Multiply 4434 by 9.

9. Divide 54352 by 4. 10. Find $\frac{1}{4}$ of 3239.

138. 1. Count by *fives* from 53 to 3.

2. Tom lost 15 of his 27 marbles; how many has he now?

3. 93 cents are 25 cents more than how much?

4. A man sold a horse for $130, and with $45 of the money bought a watch; how much had he left?

5. How much added to 254 will make 720?

6. Add 525 lb., 354 lb., 553 lb., 345 lb., and 554 lb.

7. From $4816 take $44048. 8. Multiply 3434 by 8.

9. Divide 7543 by 4. 10. Find $\frac{1}{4}$ of 3725.

139. 1. Count by *fives* from 54 to 4.

2. How many are $75 less $15? less $25?

3. What cost 8 pairs of shoes at $4 a pair?

4. At 40 cents a pound, what cost 9 pounds of tea?

5. How much was received for 7 quarts of milk, at 4 cents a pint?

6. How many bushels in 75 pecks?

7. Take $1550 from $3400. 8. Multiply 4342 by 7.

9. Divide 2746 by 4. 10. Find $\frac{1}{4}$ of 7500.

140. 1. Count by *fives* from 52 to 2.

2. Bought a book for 80 cents, and sold it losing 25 cents; how much was it sold for?

3. What cost 10 yards of cloth at 14 cents a yard?

4. Take $\frac{1}{3}$ of 72 from 80.

5. 5 times 4 are how many times 3?

6. Add 135, 54, 545, 53, 345, 52 and 453.

7. Take 5453 from 7509. 8. Multiply 3443 by 9.

9. Divide 2946 by 4. 10. Find $\frac{1}{4}$ of 7132.

141. 1. Add 5325, 4534, 15455, 25354, 5354, 1525, 4352, 5245, 3525, 5454 and 14545.

2. From 66405 take 45454. 3. Multiply 43443 by 7.

4. Divide 73403 by 4. 5. Take 5455 from 9080.

6. Find ⅓ of the answer to the first example.

7. A man paid $145 for a watch, $15 for a chain, and had $225 left; how much had he at first?

8. What amount taken from $1350 leaves $544?

9. At $4 a barrel, what cost $43 barrels of flour?

10. $154 are $235 less than how much?

142. 1. Add 543, 455, 254, 405, 523, 545 and 453.

2. From 54305 take 45554. 3. Multiply 4434 by 8.

4. Divide 75435 by 4. 5. Find ¼ of 14634.

6. Having 95 cents, how many 4-cent pencils can I buy?

7. 433 bushels are ¼ of how many bushels?

8. There were 53 passengers in a car before 15 got out; how many remained in the car?

9. How many are 10 *fours?* 6 *fours?* 10 *fours* plus 6 *fours?* how many are 16 *fours?*

10. What two equal numbers make 354?

143. 1. Add 5354, 3545, 453, 515, 5235 and 455.

2. Take 5453 from 7014. 3. Multiply 42434 by 9.

4. Divide 7071 by 3; by 4. 5. Find ⅓ of ¼ of $988.

6. How many square inches in 9 square feet?

7. A farmer having 1920 sheep, sold ¼ of them; how many did he sell? How many had he left?

8. $18 are ⅔ of how much? 9. Find ⅔ of 432.

144. 1. Add 54, 53, 45, 54, 55, 35, 545, and 453.

2. Take ⅓ of $756 from $361. 3. Multiply 3443 by 8.

4. Divide $7453 by $4. 5. Find ¼ of 3×244.

5. A has $9384, and owes $2054; what is he worth?

7. B is 45 years old; in what year was he born?

8. If I have 2 dozen eggs, sell 15, and break 4, how many have I left?

9. How many gallons in 216 pints?

10. $96÷$4=? Make a problem. (S. 7 and 18.)

Multiplication.

Table.	Exercises. —			
1×5=	I.	II.	III.	IV.
2×5=	2	6	9	10
3×5=	4	4	7	15
4×5=	6	7	10	12
5×5=	3	5	5	10
6×5=	5	8	8	20
7×5=	4	3	9	30
8×5=	2	7	7	40
9×5=	5	6	6	25
10×5=	6	8	9	18

145. 1. Learn the Table to 6×5.
2. Copy column I.; multiply *five* by each number.
3. What cost 6 hats at $5 each?
4. What cost 5 horses at $150 each?
5. 4 horses cost $965; what was the average price?
6. Add 535, 252, 415, 3504, 5545, 435 and 554.
7. From 5324 take 4553.
8. Multiply 435 by 4.
9. Multiply 545 by 3.
10. Find ¼ of $1720.

146. 1. Learn the Table to 8×5.
2. Copy column II.; multiply *five* by each number.
3. What cost 8 lemons at 5 cents each?
4. How many school days in 7 weeks?
5. $1004 are how much more than $545?
6. How many pints in 33 gallons?
7. 13020 bu.—5334 bu.=?
8. Multiply $5354 by 7.
9. Multiply 4553 by 8.
10. Find 3 fourths of 1756.

147. 1. Learn the Table to 10×5.
2. Copy columns III. and IV.; multiply *five* by each number.
3. What cost 9 barrels of flour at $5 a barrel?
4. What cost 10 yards of cloth at 45 cents a yard?
5. Divide 176 marbles equally among 4 boys.
6. Multiply $545 by 9.
7. Divide 19375 by 4.
8. What cost 10 pencils at 5 cents each? at 50 cents?
9. At 25 cents each, what cost 5 knives?

148. 1. Add 5235, 553, 455, 1204, 5345, 455 and 553.

2. From 15345 take 5553. 3. Multiply 4535 by 10, by 9.

4. Find $\frac{1}{4}$ of 3947. 5. Multiply 54535 by 8.

6. What cost 7 books at 25 cents each? 9 books?

7. How many are 9 times 5, +4? 6×5, +3?

8. If a man walk 5 miles an hour, how far will he walk in 10 hours? in 15 hours?

9. At $35 each, what cost 8 stoves?

10. Rob has 60 chickens, Tom has $\frac{1}{4}$ as many; how many have both?

149. 1. Add 512, 355, 415, 553, 415, 544, 45 and 554.

2. Take 54512 from 72457. 3. Multiply 5542 by 6.

4. Multiply 5354 by 5; by 4. 5. Find $\frac{1}{3}$ of 7×$545.

6. 4 men have together $19709; find their average wealth.

7. 4 pine-apples cost 70 cents; what will 9 cost?

8. If 4 suits of clothes can be made from 20 yards of cloth, 7 suits will require how much?

9. 12 barrels of flour cost $5 a barrel, and were sold for $72; how much was gained?

150. 1. There are 2041 sheep in one field, 1503 in another, and as many in a third as in both the others; how many in all?

2. I spend $254 out of $625; how much is left?

3. John is 15 years old; in how many years will he be 29 years old?

4. What cost 9 horses at $255 each?

5. Find $\frac{3}{4}$ of $256. 6. $24 are $\frac{3}{4}$ of how much?

7. Multiply 53525 by 9. 8. Multiply 54553 by 7.

9. How many hours in 6 days and 14 hours?

151. 1. Bought a horse for $145, and a saddle for $35, then sold them gaining $25; how much were they sold for?

2. What cost 7 pianos at $245 each?

3. $245 are $\frac{1}{5}$ of what amount?

4. Find $\frac{3}{4}$ of 912 pounds? 5. Multiply 5454 by 9.

6. $\frac{1}{3}$ of 8 times 453 = ? 7. Multiply $5352 by 8.

8. If four watches cost $220, what will 9 cost?

9. What sum taken from $563 leaves $455?

152. 1. Add 544, 3545, 5352, 25435, 14503, 5254, 3554, 5245 and 4554.

2. Take 45545 from 71491.   3. Multiply 54543 by 8.

4. Divide 9374 by 4.   5. Find $\frac{1}{4}$ of 79483.

6. How many bushels in 179 pecks?

7. What cost 10 books at 50 cents each? 15 books?

8. If you have but 74 cents, how many pencils at 4 cents each, can you buy?

9. 145 is $\frac{1}{5}$ of what number?   10. Find $\frac{3}{4}$ of $180.

153. 1. Add 5025, 453, 1520, 454, 3525, 15404, 553, 4425, 5325, 54505 and 5445.

2. From 73905 take 51455.   3. Multiply 25455 by 7.

4. Divide 379635 by 4.   5. Find $\frac{1}{4}$ of 390567.

6. A man having 140 horses, sold $\frac{1}{4}$ of them; how many had he left?

7. Tom has 53 marbles, Dick has 52, and Harry has as many as both the others; how many have they all?

8. 7×$35=? Make a problem for this example.

9. Find $\frac{2}{3}$ of 171 bushels.   10. $36 are $\frac{3}{4}$ of how much?

154. 1. Add 543, 251, 1705, 525, 353, 45 and 454.

2. Take 154525 from 270493.   3. Multiply 25545 by 9.

4. Divide 93760 by 4.   5. Find $\frac{1}{4}$ of 49476.

6. There are 52 weeks in a year; how many in 6 years?

7. There are 45 sheep in one field, and 5 times as many in another; how many in both?

8. 4 times 15 are how many times 3?

9. Beginning with 1, count by *fives* to 51. Count by *fives* from 2 to 52.

155. 1. Add 54025, 5543, 3550, 4045, 5055 and 4554.

2. From 93720 take 51505.   3. Multiply 54535 by 6.

4. Divide 29580 by 4.   5. Find $\frac{1}{4}$ of 79436.

6. Count by *fives* from 3 to 53; from 4 to 54.

7. How many 3-cent pencils are worth $1 and a half?

8. What 3 equal numbers make 75? Show clearly.

9. 10 times $5 are how many times $4?

10. How many yards in 1000 feet?

Division.

Tables. —			**Exercises. —**	
I.	II.	III.	I.	II.
5÷5=	1÷5=0,+1	$\frac{1}{5}$ of 1=$\frac{1}{5}$	20	6
10÷5=	2÷5=0,+2	$\frac{1}{5}$ of 2=$\frac{2}{5}$	30	8
15÷5=	Etc.	Etc.	15	7
20÷5=	5÷5=1	$\frac{1}{5}$ of 5=1	25	9
25÷5=	6÷5=1,+1	$\frac{1}{5}$ of 6=$1\frac{1}{5}$	35	12
30÷5=	7÷5 =2,+2	$\frac{1}{5}$ of 7=$1\frac{2}{5}$	50	22
35÷5=	8÷5=	$\frac{1}{5}$ of 8=	40	18
40÷5=	9÷5=	$\frac{1}{5}$ of 9=	10	13
45÷5=	Etc., to	Etc., to	45	19
50÷5=	50÷5=	$\frac{1}{5}$ of 50=	35	23

156. 1. Learn Table I.

2. Copy column I.; divide each number by *five;* find *one fifth* of each number.

3. $40 are how many times $5? What is $\frac{1}{5}$ of 40?

4. At 5 cents each, how many pencils cost 35 cents.

5. 5 hats cost $45; what was the price of each?

6. Add 535, 453, 250, 5453, 345, 5145 and 453.

7. Multiply 54535 by 9.   8. Divide 29293 by 4.

157. 1. Learn Table II. to 25÷5, and Table III. to $\frac{1}{5}$ of 25.

2. Copy column II.; divide each number by *five;* find *one fifth* of each number.

3. How many times $5 in $23? What is $\frac{1}{5}$ of $23?

4. Paid $18 for 5 hats; what was the price of each?

5. If you have $24, how many sheep at $5 each can you buy?

6. Multiply 53545 by 7.   7. Divide 39437 by 4.

8. Write the numbers 30 to 35 in a *line;* add them.

158. 1. Learn table II. to 40÷5, and table III. to $\frac{1}{5}$ of 40.

2. At $5 a ton, how many tons of coal cost $38?

3. Make a column like II.; divide each number by *five;* find *one fifth* of each.

4. Add 35, 154, 25, 54, 315, 250, 45, 53 and 245.

5. Take 54553 from 70548.   6. Multiply 54352 by 8.

7. *Multiply* 45525 by 7.   8. Find $\frac{1}{5}$ of 42285.

159. 1. Learn Table II. to 50÷5, and Table III. to $\frac{1}{5}$ of 50.

2. Make a column like II.; divide each number by *five*; find *one fifth* of each.

3. At 5 cents each, how many tops cost 45 cents?

4. Tom has $33, Dick has $\frac{1}{5}$ as much; how much has he?

5. 5 suits of clothes cost $39; find the average cost.

6. Find what 7 pens cost, if five cost 25 cents.

7. Take $4535 from $7204.   8. Multiply $4553 by 9.

9. $45 are $\frac{1}{5}$ of how much?   10. Find $\frac{1}{4}$ of 11316.

160. 1. Add 355, 4525, 5024, 3554, 4535 and 35054.

2. Take 54535 from 80193.   3. Multiply 54535 by 6.

4. Joe earned 45 cents; after spending $\frac{1}{3}$ of it, how much had he left?

5. Find $\frac{1}{5}$ of $87. Make a problem for this example.

6. At 15 cents a pound, what cost 9 pounds of butter?

7. How many sides have 8 pentagons? Make them.

8. John gathered 75 pints of hazel-nuts; he sold $\frac{1}{5}$ of them; how many quarts had he left?

161. 1. Add 3545, 552, 545, 3553, 454, 515, 352, 1545, 5255 and 4554.

2. From 10360 take 5545.   3. Multiply 5454 by 8.

4. Divide 27325 by 5.   5. Find $\frac{1}{5}$ of 13940.

6. How many times $5 can be taken from $96.

7. 5 acres of land cost $183; find the price per acre.

8. Find $\frac{1}{5}$ of $1720.   9. Find $\frac{3}{5}$ of 560.

10. A boy bought 7 tops at 5 cents each; he gave the dealer a half-dollar; how much change did he get?

162. 1. Add 245, 5453, 2005, 541, 545, 5342, 5453, 504, 550, 1543, 2550, 454, 1525, 535 and 1352.

2. Take 15354 from 2073.   3. Multiply 5455 by 6.

4. Divide 73007 by 5.   5. Find $\frac{1}{5}$ of 11419.

6. 9 pianos cost how much at $350 each?

7. Sold a horse for $235, losing $54; find the cost.

8. A boy having $45 lacks how much of having enough to buy a pony worth $70.

9. What are 10 mules worth at $55 each? 15 mules?

163. 1. Add 5251, 14053, 15525, 4355, 4524, 25434, 13453, 5204, 35435 and 4553.

2. Take 53545 from 70042.
3. Multiply 54355 by 7.
4. Divide 83576 by 5.
5. Find $\frac{1}{5}$ of $\frac{1}{4}$ of 3960.

6. How much was received for 15 gallons of milk, which was sold at 5 cents a pint?

7. $253 are one fifth of how much?
8. At 45 cents each, what cost 9 arithmetics?
9. Find $\frac{1}{5}$ of the sum of $453 and $345.
10. Nine times $44 are how many times $5?

164. 1. Add 245, 5453, 2005, 541, 355, 2542, 2555 and 453.

2. From 53847 take 45553.
3. Multiply 54535 by 8.
4. Divide 97065 by 5.
5. Find $\frac{2}{5}$ of $1340.
6. I sold a piano for $325, losing $45 ; find the cost.

7. If a man smoke five 5-cent cigars a day, how much will he waste in six weeks?

8. At 35 cents a pound, what cost 8 pounds of butter?
9. 9×55 cents $=$? Make a problem for this example.
10. How many hours in ten days? in 15 days?

165. 1. Add 53, 415, 543, 455, 54, 545, 1504 and 255.

2. Take $45352 from $70546.
3. Multiply 5453 by 9.
4. Divide 19437 by 5.
5. Find $\frac{3}{5}$ of 750 bu.
6. 5 times 15 cents are how many times 3 cents.
7. How much more than $345 are $713?
8. Seven 25-cent pieces are equal to how many cents?
9. How many times $5 may be taken from $89?
10. Count by fives from 2 to 52; from 3 to 48.

166. 1. Add 305, 453, 515, 2543, 5405, 355 and 454.

2. Take 53453 from 60924.
3. Multiply 35452 by 8.
4. Divide 78365 by 5.
5. Find $\frac{4}{5}$ of $1250.

6. If I sell 425 bushels or potatoes, and have 354 left, how many bushels had I at first?

7. 217 men are how many more than 154 men?
8. Five acres of land cost $1140; what was the price per acre?
9. How many days in the first 7 months of the year?
10. What number added to 355 makes 960?

VI. THE NUMBER SIX

Addition.

Table.	**Exercises.**—			
1+6=	I.	II.	III.	IV.
2+6=	4	7	10	6
3+6=	1	11	18	5
4+6=	3	8	9	6
5+6=	5	16	19	4
6+6=	2	13	17	6
7+6=	11	17	27	3
8+6=	13	15	25	6
9+6=	6	18	16	6
10+6=	15	14	36	(?)

167. 1. Learn the Table to 6+6.

2. Copy column I.; add *six* to each number.

3. If you have 6 marbles and buy six more, how many will you have? If you have 16 and buy 6?

4. There are 45 sheep in one flock, and 26 in another, how many in both?

5. What cost 9 pounds of butter, at 45 cents a pound?

6. How many dollars more than $554 are $712?

7. Find $\frac{1}{5}$ of $446. 8. 76 bu. are $\frac{1}{5}$ of how many?

9. When 4 oranges cost 20 cents, what will 9 cost?

10. Tom had 15 oranges, he bought 6 more, then gave away 5; how many had he left?

168. 1. Learn the table to 8+6.

2. Copy column II.; add *six* to each number.

3. There are 18 books on one shelf and 6 on another; how many on both?

4. A drover having 1450 sheep, sold $\frac{1}{5}$ of them; how many had he left?

5. How many eggs in 10 dozen? in 5 dozen? 15 dozen?

6. Find $\frac{2}{3}$ of 1200 yards. 7. $(435 \times 7) \div 5 = ?$

8. Take 4355 from 7048. 9. 54 are $\frac{2}{3}$ of how many?

10. 5 horses cost $440; what was the average price?

169. 1. Learn the Table to 10+6.

2. Copy column III.; add *six* to each number.

3. Copy column IV.; add the column; say *one* and add; say *two; three*, etc.

4. Count by *sixes* from 1 to 49; 2 to 62; 3 to 63.

5. There are in our school 56 boys and 63 girls, in another 163 boys and 146 girls; how many boys in both? how many girls in both? how many pupils in both?

6. Add 26, 16 and 15 without writing the numbers.

7. What number multiplied by 5 gives 165?

8. At $15 a barrel, what cost 10 barrels of pork?

9. Find $\frac{1}{5}$ of the sum of $364 and $436.

10. Divide $754 by $5. 11. Multiply 5453 by 8.

170. 1. Add 653, 446, 623, 1266, 456, 1636, 356 and 665.

2. From 25643 take 10555. 3. Multiply 5455 by 9.

4. Divide 27369 by 5. 5. Find $\frac{1}{5}$ of $\frac{1}{3}$ of 3717.

6. There are 27 books on one shelf, and 16 on another, how many on both?

7. If you have 27 cents, sell a top for 6 cents, then earn 15 cents; how much will you have?

8. 46 cents taken from how much leaves 66 cents?

9. 5 coats cost $46; what was the average price?

10. $9 are 3 fourths of my money; how much have I?

171. 1. Add 5646, 364, 4566, 6264, 3656, 646 and 465.

2. A man earns $56 one month, $64 the next, and $46 the third; how much will he have left after spending one half of what he has earned?

3. If 3 men build a wall in 5 days, how long should it take one man? 4 men?

4. Take $4535 from $7183. 5. Multiply 54525 by 7.

6. Divide 27736 by 5. 7. Find $\frac{3}{5}$ of $415.

8. Sold a horse for $155, losing $16; find the cost.

9. Tom has 13 pigeons, Joe has twice as many; how many have they both?

10. 9 times $4 are how many times $5.

11. Add $256, $65, $116, $614, $63 and $456.

172. 1. Add 6035, 656, 5645, 5406, 1654, 563, 26460, 65436, 6646 and 5465.

2. Take 45545 from 83742.   3. Multiply 20535 by 9.

4. From 100760 take 55453.   5. Divide 79436 by 5.

6. 160 square rods of land make one acre; how many square rods in half an acre?

7. To what amount must $54 be added to make $100?

8. A clerk's salary is $850 a year; his expenses are $430 a year; how much may he save in 2 years?

9. A man bought a lot for $650, built a house on it for $1360, and sold the property at a gain of $625; how much did he sell it for?

10. Take 7 times $50 from 7 times $55. Make a problem.

173. 1. Add 563, 654, 1566, 356, 611, 546 and 664.

2. From 305060 take 154014.   3. Multiply 405525 by 7.

4. Divide 69436 by 5.   5. Find $\frac{4}{5}$ of 365 days.

6. How many school days in 15 weeks?

7. How many "nickels" are worth as much as 7 twenty-five-cent pieces?

8. What cost 3 hats at a dollar and a half each?

9. If a piano was sold for $165, and that is $45 more than it cost, how much did it cost?

10. A man was born in 1845; how old is he?

11. Write the numbers 60 to 66 in a *line;* add them.

174. 1. Add 563, 1646, 546, 3256, 625, 566 and 365.

2. Take 51345 from 80900.   3. Multiply 54355 by 6.

4. Divide 67450 by 5.   5. Find $\frac{1}{5}$ of 73562.

6. How many sheets of paper in 9 quires?

7. How many inches in 10 feet? in 15 feet?

8. Count by *fives* from 1 to 61; by *sixes.*

9. How many rods in seven miles 256 rods?

10. Two men start from the same place, and travel in the same direction; one travels 23 miles a day, the other 48 miles a day; how far apart will they be at the end of six days?

11. There are 52 weeks in a year; how many in 7 years?

12. 9 times $5 are how many times $3?

Subtraction.

Table.	**Exercises. —**			
	I.	II.	III.	IV.
6—6=	6	11	15	17
7—6=	8	16	13	33
8—6=	10	12	19	12
9—6=	7	22	11	14
10—6=	9	26	22	17
11—6=	19	21	14	21
12—6=	17	19	24	25
13—6=	20	27	23	15
14—6=	18	31	25	13
15—6=				

175. 1. Learn the Table to 12—6.

2. Copy columns I. and II.; take *six* from each number.

3. Walter had 18 cents given him; he spent six cents for some marbles; how much had he left?

4. If 6 apples are taken from 17 apples, how many remain?

5. John had $15; he earned $4 more, then spent $6; how much had he left?

6. If you take 45 eggs from 5 dozen, how many are left?

7. How many 5-dollar hats cost $75?

8. A man sold a farm for $6800; after spending $\frac{1}{5}$ of the money, how much had he left?

9. Take 5436 from 9358. 10. Multiply 1554 by 9.

176. 1. Learn the Table to 15—6.

2. Copy columns III. and IV.; take *six* from each number.

3. What number taken from 126 leaves 65?

4. I paid $10 for 3 yards of cloth, and sold it at $5 a yard; how much did I gain?

5. In one school there are 465 pupils, in another 356, in a third 563; how many in the three schools?

6. John raised 25 chickens; he bought 16 more, then sold 26; how many had he left?

7. Multiply 5435 by 7. 8. 120 are $\frac{2}{3}$ of what?

9. Take 1646 from 2463. 10. Find $\frac{3}{5}$ of 815 lb.

11. 9 times $4 are how many times $3?

177. 1. Take away *sixes* from 60 to 0; from 61 to 1.

2. From 10416 take 6563. 3. Multiply 45553 by 9.

4. Take 6406 from 8321. 5. Find $\frac{4}{5}$ of 7525.

6. A farmer raised 1830 bushels of wheat; after selling $\frac{1}{5}$ of his crop, how many bushels had he left?

7. There are 431 pupils in one school, which is 165 more than there are in another; how many in both?

8. At 55 cents a bushel, what cost 8 bushels of apples?

9. $48 are $\frac{4}{5}$ of how much?

10. 7 times $5 are how many times $4?

178. 1. Add 615, 1634, 656, 2063, 6546, 665 and 416.

2. Take $645 from 7×$453. 3. Find $\frac{1}{5}$ of 43250.

4. Multiply 50554 by 8. 5. From 17000 take 6564.

6. If 5 pairs of boots cost $25, how much will 8 pairs cost at the same rate?

7. A boy having 15 marbles, bought 4 times as many more; how many had he then?

8. $253 was $\frac{1}{5}$ of the price of a building lot; how much did it cost?

9. A man saved $13025 in five years; how much did he save each year?

10. When milk costs 5 cents a quart, how many gallons can you buy for 95 cents?

179. 1. Add 645, 456, 3626, 648, 556, 6236, 546, 1613, 2616 and 1655.

2. From 12390 take 6565. 3. Multiply 5453 by 7.

4. Divide 13760 by 5. 5. Take 6416 from 9425.

6. A man left his three sons $1560 each; the first gained $1650, the second $1250, the third lost $360; how much had each then? how much had all?

7. What cost 10 lb. of butter at 45 cents a pound, and 9 lb. of sugar at 16 cents a pound?

8. By selling a plow for $29, I lost $16; find the cost.

9. $48 are $\frac{4}{5}$ of how much? Make a problem.

10. How many gallons in 217 pints?

11 Take away *sixes* from 62 to 2; from 65 to 5.

180. 1. Add 516, 665, 1466, 365, 644, 3656 and 565.

2. Take 45546 from 74580. 3. Multiply 5455 by 7.

4. Divide 67542 by 5. 5. Find $\frac{1}{5}$ of 65360.

6. There are 65 pupils in one room, 116 in another, and 64 in a third; if they be divided into 5 equal classes, how many will there be in each?

7. Count by *sixes* from 2 to 50; from 5 to 59.

8. Divide 6 times $5 by $4. Make a problem.

9. If you buy 4 dozen eggs, and break 16 of them, how many remain unbroken?

10. If a man earn $17 a week and spend $12 a week, how long will it take him to save $60?

181. 1. Add 6256, 663, 516, 5645, 316, 666 and 465.

2. Take 56365 from 70306. 3. Multiply 4553 by 8.

4. Divide 70536 by 5. 5. Find $\frac{2}{5}$ of 4835.

6. 24 sheets of paper make one quire; if 4 sheets of paper will make one copy-book, how many copy-books will 3 quires of paper make?

7. John is now 16 years old, in what year was he born?

8. Tom sold a pony for $80; after spending $\frac{1}{5}$ of the money, how much had he left?

9. 8 times 5 cents are how many times 4 cents?

10. What cost 8 pianos at $350 each?

11. How many rods in 8 miles and 156 rods?

12. 520 days are how much more than a year?

182. 1. Add 5632, 6206, 565, 316, 646, 566 and 1656.

2. Take 63562 from 87305. 3. Multiply 35453 by 9.

4. Divide 91546 by 5. 5. Find $\frac{3}{5}$ of 710.

6. How many days in the last 5 months of the year?

7. Subtract *sixes* from 59 to 5; from 52 to 4.

8. If a boy save $5 a month, in how many months will he save $57?

9. When 4 oranges cost 20 cents, what will 9 cost?

10. If I pay $56 on a debt of $110, how much remains unpaid?

11. A farm cost $3620; was sold for $5500; find the gain.

12. Divide $76 by $5. Make a problem.

Multiplication.

Table.	Exercises. — I.	II.	III.	IV.
1×6=				
2×6=	2	5	10	10
3×6=	4	7	8	20
4×6=	3	9	3	4
5×6=	5	6	7	14
6×6=	2	10	9	10
7×6=	4	8	5	5
8×6=	5	5	8	15
9×6=	3	9	4	30
10×6=	6	7	6	40

183. 1. Learn the Table to 6×6.

2. Copy column I.; multiply *six* by each number.

3. At 6 cents a yard, what cost 5 yards of tape?

4. What cost 6 plows at $6 each? at $16?

5. How many work-days in 4 weeks?

6. What cost 3 sleighs at $60 each?

7. Add $563, $613, $465, $363, $1266 and $565.

8. Multiply $465 by 5. 9. Multiply 6364 by 4.

10. $24 are one sixth of how much?

184. 1. Learn the Table to 10×6.

2. Copy columns II. and III.; multiply *six* by each number.

3. What cost 9 tons of coal at $6 a ton.

4. What is $\frac{1}{3}$ of 6 times $16? Make a problem.

5. How many inches in 8 yards? 10 yards?

6. 160 square rods make an acre; how many square rods in 7 acres?

7. If I earn $68 a month, and my expenses are $42 a month, how much may I save in 8 months?

8. What cost 8 tons of hay at $16 a ton? 10 tons? 15 tons? 20 tons?

9. In a bell there are 36 pounds of tin and 7 times as much copper; how much does it weigh?

10. How many days in 6 years of 365 days each?

11. Count by *sixes* from 6 to 66.

185. 1. Copy column IV.; multiply *six* by each number.

2. Multiply 6361 by 5.

3. Take 166×6 from 9240.

4. Find $\frac{1}{6}$ of 365 days.

5. Multiply 3665 by 6.

6. If 5 men build a wall in 6 days, how many men can do it in one day? in 5 days?

7. Six sheets of paper make one book; how many sheets will be required for 24 books?

8. What number taken from 6×365 leaves 1256?

9. How many books, at $5 each, cost $115?

10. There are 6 feet in a fathom; how many feet are there in 10 fathoms? in 15 fathoms?

186. 1. Add 5636, 6505, 565, 1636, 2565, 16366, 25656, 6653, 56364, 26406, 36656 and 5365.

2. Take 63656 from 76436.

3. Multiply 6566 by 9.

4. Multiply 56365 by 8.

5. Divide 17365 by 5.

6. How many inches in 8 yards?

7. If 5 horses cost $830, how much will 10 cost at the same rate?

8. A man was born in 1826; if he lived 46 years, in what year did he die?

9. A man had $1240; he gained $560, then lost $6334; how much has he left?

10. If I buy 8 horses at $165 each, and sell them for $1750, how much will I gain?

187. 1. Add 656, 3563, 6645, 566, 614, 5641, 6465, 5356, 6423, 626 and 1665.

2. Take 6566 from 23780.

3. Multiply 6463 by 9.

4. Multiply 56636 by 6.

5. Divide 12936 by 5.

6. A farmer sells 165 bushels of oats, 356 bushels of wheat, 160 bushels of barley and 236 bushels of corn; how many bushels of grain does he sell in all?

7. There are 16 ounces in a pound; how many ounces in 8 pounds of butter?

8. If 8 men build a fence in 6 days, how long should it take 5 n?

, How many minutes in 5 hours? in 10 hours?

188. 1. Add 6465, 5636, 64356, 3646, 46565, 63656, 5463, 56465, 6456 and 5665.

2. From 73635 take 64563.
3. Multiply 5646 by 9.
4. Divide 35436 by 5.
5. Find $\frac{4}{5}$ of 7320.

6. John has 70 cents, James $\frac{1}{5}$ as many; how many have they both?

7. Will earned 90 cents; he lost 5 cents and gave away 20 cents; how much had he left?

8. If a man walk 5 miles an hour how long will it take him to walk 48 miles?

9. What number must I add to 365 to make 900?

10. 5 barrels of flour cost $47; what cost 1 barrel?

189. 1. Add 616, 5463, 26654, 6566, 4636, 6216, 665, 5446 662, 626, 6564, 5646, and 6266.

2. Find $\frac{1}{3}$ of (7553—3665).
3. Multiply 5665 by 8.
4. Divide 83562 by 5.
5. Find $\frac{1}{5}$ of 33840.

6. In a pound there are 16 oz.; how many in 8 lb.?

7. How many inches in 9 yards?

8. There are 160 square rods in an acre; how many square rods in 8 acres?

9. If $38420 be divided equally among 5 persons, how much will each receive?

10. Sold a watch costing $120 for $65; how much was lost? Find $\frac{3}{5}$ of the loss.

190. 1. Add 646, 6463, 646, 1660, 4653, 1645, 466, 6623, 1606, 1465 and 6646.

2. From $7463 take $5646.
3. Multiply 6566 by 7.
4. Divide 74836 by 5.
5. Find $\frac{1}{5}$ of 71463.

6. What cost 9 lb. of butter, at 46 cents a pound?

7. At $26 a ton, what cost 9 tons of iron?

8. What number was 5456 taken from to leave 5636?

9. There were 140 boys in a school; on a stormy day $\frac{1}{5}$ of them were absent; how many were present?

10. I find that $\frac{1}{5}$ of my money is $25; how much money have I?

11. How many work-days in 10 weeks?

12. How many inches in $\frac{2}{3}$ of a yard? in $4\frac{2}{3}$ yards?

Division.

Tables. —			**Exercises. —**	
I.	II.	III.	I.	II.
6÷6=	1÷6=0, +6	$\frac{1}{6}$ of 1=$\frac{1}{6}$	12	6
12÷6=	2÷6=0, +2	$\frac{1}{6}$ of 2=$\frac{1}{3}$	48	9
18÷6=	3÷6=	$\frac{1}{6}$ of 3=$\frac{1}{2}$	30	14
24÷6=	4÷6=	$\frac{1}{6}$ of 4=$\frac{2}{3}$	24	20
30÷6=	5÷6=	$\frac{1}{6}$ of 5=$\frac{5}{6}$	36	25
36÷6=	6÷6=1	$\frac{1}{6}$ of 6=	18	23
42÷6=	7÷6=1,+1	$\frac{1}{6}$ of 7=	42	21
48÷6=	Etc., to	Etc., to	54	17
64÷6=	59÷6=9, +5	$\frac{1}{6}$ of 59=9$\frac{5}{6}$	36	29
60÷6=	60÷6=10	$\frac{1}{6}$ of 60=10	60	27

191. 1. Learn Table I.

2. Copy column I.; divide each number by *six;* find *one sixth* of each number.

3. At 6 cents each, how many pencils cost 30 cents?

4. $48 are how times $6?

5. 6 lamps cost $42; what was the price of each?

6. How many fathoms in 18 feet?

7. Add 366, 565, 216 and 456. Make a problem.

8. From 7 times $656 take $3656.

9. What cost 36 tons of coal at $6 a ton?

10. Joe bought 7 dozen marbles; how many had he left after selling $\frac{1}{6}$ of them?

192. 1. Learn Table II., to 36÷6, and Table III. to $\frac{1}{6}$ of 36.

2. Copy column II.; divide each number by *six;* find *one sixth* of each number.

3. Find $\frac{1}{6}$ of 547.
4. Divide 3867 by 6.

5. Take 65366 from 90540.
6. Multiply 6365 by 7.

7. A dealer paid $624 for lemons at $6 a box; how many boxes did he buy?

8. At 36 cents a pound, what cost 9 pounds of coffee?

9. $65 are $\frac{1}{6}$ of how many dollars?

10. How much greater than 656 are 1100?

11. Nine times 4 are how many times five?

193. 1. Learn Tables II. and III.

2. Make a column like II., using no number greater than 60; divide each by *six;* find *one sixth* of each.

3. At 6 cents each, how many spools cost 54 cents?

4. 6 is contained in 4863 how many times?

5. A house and lot were bought for $6350, and sold for $7520; what was the profit?

6 How many rods in 7 miles?

7. John solves 26 problems each day for 10 days; how many more must he solve to have 350?

8. How many fathoms in 144 feet?

9. Half a dozen knives cost $14; how much did they cost a piece?

10. How many gallons in 236 pints?

194. 1. What cost 10 horses at $165 each? 12 horses?

2. How many pieces 6 feet long can be cut from 4 cords each 24 feet long?

3. If 6 bureaus cost $150, much will 9 cost?

4. Multiply $6566 by 9. 5. Multiply 6536 by 8.

6. Divide 59871 by 6. 7. Find $\frac{1}{6}$ of 19361.

8. $90 are $\frac{2}{3}$ of how much? 9. Find $\frac{5}{6}$ of $186.

10. There are 56 marbles in one box, 34 in another, and 36 in a third; if they be divided equally among 6 boys, how many will each have?

195. 1. Add 6365, 615, 566, 364, 546, 3646, 16563, 5625, 26416 and 1665.

2. Divide $16564 by 9. 3. Take 63656 from 76397.

4. Divide 59370 by 6. 5. Multiply 65356 by 8.

6. 65 is one sixth of how much? Make a problem.

7. Find $\frac{1}{6}$ of 5 times $3261.

8. If I take the difference of 150 and 46 from their sum, how much have I left?

9. If $3837 be divided equally among 6 persons, how much will each receive?

10. How many seconds in 7 minutes?

11. How many inches in 9 yards?

196. 1. Add 536, 1656, 465, 564, 1656, 561 and 1666.

2. Take 65366 from 87090. 3. Multiply 56364 by 9.

4. Divide 790063 by 6. 5. Find $\frac{1}{6}$ of 835070.

6. How many inches in 7 yards and 16 inches?

7. 6 acres of land cost $675; find the price per acre.

8. A man sold 9 loads of oats, each containing 46 bushels; how many bushels did he sell?

9. A watch cost $156, the chain cost $\frac{1}{6}$ as much; how much did both cost?

10. What cost 8 yards of cloth at 30 cents a yard, 5 dozen of eggs at 22 cents a dozen, and 10 pounds of coffee at 36 cents a pound?

197. 1. Add 1656, 563, 3626, 460, 526, 6656 and 3565.

2. From 72400 take 56636. 3. Multiply 56326 by 7.

4. Take 156466 from 376430 5. Find $\frac{3}{5}$ of 755 feet.

6. How many days in 9 years of 365 days each?

7. A farm cost $5620, was sold for $7500; find the gain.

8. A farmer sold 165 sheep from a flock of 531, then bought 256 more; how many has he now?

9. Seven times $6 are how many times $4?

10. If 3 oranges are worth 9 apples, how many oranges are 24 apples worth?

198. 1. Add 663, 566, 6416, 64565, 6556, 656 and 465.

2. From 78305 take 65663. 3. Multiply 56656 by 5.

4. Divide 65678 by 6. 5. Find $\frac{5}{6}$ of 3738.

6. A man traveled 358 miles in 6 days; what was the average number of miles he traveled each day?

7. A man sold a team losing $\frac{1}{6}$ of the cost, which was $330; find the loss; find the selling price.

8. Seven times 6 feet are how many times 4 feet?

9. John is 8 years old, Helen is 6 years older than he, and their mother is 26 years older than Helen; how old is their mother?

10. John has a 2-dollar bill; if he buys a knife for 65 cents, and 3 chickens at 20 cents each, how much will he have left?

11. How many square rods in 9 acres?

199. 1. Add 5605, 26364, 16526, 64365, 16056. 5625. 6364. 5626, 16366 and 5665.

2. Take 64365 from 89528.   3. Multiply 65626 by 7.

4. Divide 65839 by 6.   5. Find ⅚ of 7728.

6. 8 horses at $165 each, are worth how much more than 9 mules at $136 each?

7. How much will 3 tons of hay cost, if 6 tons cost $36? If 6 tons cost $84?

8. What cost 7 pounds of cheese at 16 cents a pound, and 9 pounds of butter at 26 cents a pound?

9. How many inches in 7 yards and 26 inches?

10. Ten times $6 are how many times $5?

200. 1. Add 5366, 2626, 563, 646, 1665, 356 and 665.

2. Take 56364 from 70508.   3. Multiply 36564 by 8.

4. Divide 91379 by 6.   5. Find ⅙ of 100080.

6. If 5 yards of muslin cost 30 cents, how much will ten yards cost?

7. A man earned $24 one week, and the next week ⅚ as much; how much did he earn in both weeks?

8. A grocer paid $156 for flour, at $6 a barrel; how many barrels did he buy?

9. How many minutes in 7 hours and 36 minutes?

10. Write the numbers from 20 to 26, 30 to 36 and 40 to 46 in a column, and add them.

201. 1. Add 636, 165, 556, 1645, 566, 365, 516 and 656.

2. Take 65365 from 108290.   3. Multiply $6536 by 9.

4. Find ⅘ of 4765.   5. Divide 78367 by 6.

6. A farmer having 125 sheep, sold ⅗ of them; how many had he left?

7. I sold a horse for $160, gaining $36; find the cost.

8. Count by *sixes* from 5 to 59; from 3 to 51.

9. A man handed a merchant a 50-dollar bill in payment for a coat worth $25 and a hat worth $6; how much did he get in change?

10. Divide $130 by $6. Make a problem.

11. ⅔ of 36 are how many times 4?

202. 1. Add 5646, 6326, 665, 1646, 36564, 6016, 3626, 36564, 3626, 50364 and 6466.

2. From 94305 take 66562. 3. Multiply 6566 by 5.

4. Divide 34364 by 6. 5. Find $\frac{1}{6}$ of 35445.

6. At $60 each what cost 9 horses ?

7. $546 are $\frac{1}{6}$ of how much? $\frac{3}{10}$ of how much?

8. A man having $714 spent one sixth of it; how much had he left?

9. 1700 bushels are how many more than 663 bushels?

10. Mr. Brown has $732 and Mr. Smith has $\frac{5}{6}$ as much; how much has Mr. Smith? how much have both?

203. 1. Add 5636, 6545, 23646, 6365, 6306, 56065, 65646, 64636, 56465 and 5636.

2. Take 56365 from 70590. 3. Multiply 5646 by 8.

4. Divide 173460 by 6. 5. Find $\frac{1}{6}$ of 37569.

6. How many inches in 9 yards and 26 inches?

7. How many minutes in 9 hours and 36 minutes?

8. 4 times $65 are how many times $5?

9. Half a dozen knives cost $14; how much did each cost? What cost 2 dozen at that price?

10. If 6 yards of cloth are required to make one suit of clothes, how many suits may be made from 112 yards of the same kind?

204. 1. Add $3656, $566, $6326, $6456, $5663, $516, $664, $6456, $6326 and $5665.

2. From 75630 take 36465. 3. Multiply 6564 by 7.

4. Divide 39476 by 6. 5. Find $\frac{1}{6}$ of 71480.

6. How many ounces in 8 pounds and 6 ounces?

7. $24 are $\frac{2}{5}$ of how much money?

8. What is the average price of 6 cows, costing respectively $52, $36, $46, $64, $56 and $63?

9. A man bought a lot for $1650, built a house on it costing $2560, and then sold the property at a gain of $650; what was selling price?

10. A man had $480, he spent $\frac{3}{4}$ of it for a team; how much had he left?

11. $320 are $\frac{5}{6}$ of how much?

VII. THE NUMBER SEVEN.

Addition.

Table.	**Exercises.** —			
1+7=	I.	II.	III.	IV.
2+7=	3	6	7	7
3+7=	5	16	9	5
4+7=	2	13	19	7
5+7=	4	5	8	6
6+7=	6	15	10	7
7+7=	11	22	20	7
8+7=	15	33	8	4
9+7=	12	26	18	7
10+7=	14	24	17	(?)

205. 1. Learn the Table to 6+7.

2. Copy columns I. and II.; add *seven* to each number.

3. If you have $5, earn $7 more at one time, and $7 more at another, how much will you have?

4. $6 and $7 are how many? $16+$7? $16+$17?

5. John has 5 marbles, Tom has 7, and Harry has half as many as both; how many have they all?

6. What cost 10 tons of hay at $16 a ton?

7. How much was 56 cents taken to leave 35 cents?

8. Add $636, $265, $466, $536, $326, $615 and $46.

9. Multiply 6365 by 9. 10. Find $\frac{1}{6}$ of 5×456.

206. 1. Learn the Table to 10+7.

2. Copy column III.; add *seven* to each number.

3. Add column IV.; say *one* and add; *two; three;* etc.

4. If you read 17 pages one day, 7 the next, and 7 the third, how many pages do you read in all?

5. There were 18 girls in a party after 7 went home; how many were there at first?

6. How many work days are there in 12 weeks?

7. Add 656, 1363, 566, 436, 615, 1606 and 565.

8. Take 63656 from 98439. 9. Multiply 3656 by 8.

10. Divide 2354 by 6. 11. Find $\frac{1}{5}$ of 17435.

207. 1. Count by *sevens* from 5 to 68.

2. Bought a horse for $65 and sold it at a gain of $17; find the selling price.

3. There are 18 boys in a party before 17 more joined it; how many were there then?

4. How many are 9 times $6, plus $7? $8 \times 5, +17 = ?$

5. A merchant pays his four clerks $60 a month each; how much does the pay them all?

6. How much was $75 taken from to leave $67?

7. 8×$6, +$17=? Make a problem for this example.

8. Find $\frac{5}{6}$ of 726 feet. 9. $75 are $\frac{3}{5}$ of what?

10. What cost 8 acres of land at $65 per acre!

208. 1. Count by sevens from 4 to 60.

2. How many are 30 and 70? $35+77=?$

3. Mary has 22 yards of ribbon, and Sue has 17 more than Mary; how many have both?

4. A lady went shopping with $65; she paid $12 for a shawl, $17 for a dress, and $7 for a hat; how much did she pay out? how much had she left?

5. How many half dozens in 81 eggs?

6. What cost 10 coats at $16 each? 15 coats?

7. How many inches are there in 9 yards?

8. How many minutes in 7 hours and 27 minutes?

9. Find $\frac{5}{6}$ of $1728. 10. 102 bu. are $\frac{3}{5}$ of what?

209. 1. Add 576, 7326, 6747, 5763, 5675, 767, 5374, 6747, 576, 1647 and 776.

2. From 71480 take 67557. 3. Multiply 4636 by 9.

4. Divide 67471 by 6. 5. Find $\frac{1}{6}$ of 35471.

6. A dealer sold 75 tons of coal to one party, 167 tons to another, 147 tons to a third, and had 377 left; how much had he at first?

7. A trader brought 8 horses at $65 each, and sold them all at a gain of $175; how much did he get?

8. $144 are 6 times how much?

9. 8×$56, —$37=? Make a problem.

10. Write and add the numbers from 71 to 77.

210. 1. Warren earned $19, sold a calf for $7, then paid $5 for a pair of skates; how much had he left?

2. A man bought a harness for $42, and sold it for $\frac{1}{6}$ as much more; how much did he get for it?

3. At $6 each how many stoves cost $54?

4. How many seconds in 10 minutes? 20 minutes?

5. $\frac{2}{3}$ of 48 are how many times 4?

6. Add 677, 6572, 576, 7727, 716, 673, 7277 and 773.

7. From 13654 take 6546.   8. Multiply 6465 by 7.

9. Divide 56732 by 6.   10. Find $\frac{5}{8}$ of 5376.

211. 1. Add 7107, 52072, 6757, 673, 7567, 72574, 712, 377, 724, 5076, 7727 and 7576.

2. Take 4643 from 5173.   3. Multiply 6365 by 9.

4. Divide 25367 by 6.   5. Find $\frac{1}{4}$ of $\frac{1}{6}$ of 9354.

6. In one class there are 17 pupils, in another 26, in a third 27, in a fourth 37; how many in all?

7. At 65 cents each, what cost 9 books?

8. A watch which cost $200, was sold for $156; how much was lost?

9. A man having $1,200, paid out $457 at one time, and 2505 at another; how much had he left?

10. Find $\frac{5}{6}$ of $732. Make a problem. (S. 18.)

212. 1. Add 7365, 7746, 16517, 7675, 7047, 7561, 71754, 7057, 3675, 7377 and 41776.

2. From 140000 take 55463.   3. Multiply 65646 by 8.

4. Divide 26430 by 6.   5. Find $\frac{2}{3}$ of 8538.

6. If a boy can save $6 a month, in how many months can he save $125?

213. 1. How many pieces 6 feet long, may be cut from 8 boards each 12 feet long?

2. Count by *sevens* from 1 to 71; from 3 to 73.

3. A half dozen knives cost four dollars and fifty cents; what did each cost?

4. How many yards in 77 feet? 3000 inches?

5. How many inches in 7 yards and 17 inches?

6. Count by *sevens* from 4 to 74; from 6 to 76.

Subtraction.

Table.	Exercises. —			
	I.	II.	III.	IV.
7—7=	10	14	16	19
8—7=	7	27	14	16
9—7=	9	13	23	37
10—7=	11	23	15	42
11—7=	8	21	25	12
12—7=	12	19	34	51
13—7=	22	29	21	14
14—7=	21	11	16	22
15—7=	19	31	26	15
16—7=				

214. 1. Learn the Table to 13—7.

2. Copy columns I. and II.; take *seven* from each number.

3. Mary is 7 years old; in how many years more will she be 12 years old?

4. John spent 7 of the 21 cents given him; how much had he left?

5. There were 13 people in a car before 6 more came in; then 7 went out; how many were left?

6. Add 736, 667, 374, 1727, 476, 367, 757 and 76.

7. Take 576 from 926. 8. Multiply 4656 by 9.

9. Divide 59693 by 6. 10. Find $\frac{5}{6}$ of 7350.

215. Learn the Table to 16—7.

2. Copy columns III. and IV.; take *seven* from each number.

3. If you have but $7, how much more must you get to have enough to buy a watch costing $16?

4. 7 boys leave a group of 14 boys; how many remain?

5. How many are 26—7? 26—17?

6. A girl had a library book containing 334 pages; after reading 177 pages, how many had she to read?

7. How many ounces in nine pounds and seven ounces?

8. Add 757, 317, 7576, 674, 6477, 375, 1756 and 377.

9. Take 5737 from 6972. 10. Multiply 6366 by 7.

11. Divide 17396 by 6. 12. Find $\frac{3}{5}$ of 1325.

13. At $65 a pound, what cost 8 pounds of tea?

216. 1. Add 72507, 7675, 27467, 74773, 516, 711, 7577, 37767, 7576, 73675 and 27757.

2. Take 27576 from 74000.   3. Multiply 66562 by 6.

4. Divide 64321 by 6.   5. Take $1227 from 6×$575.

6. 6 men together are worth $92300; what is their average wealth?

7. How many rods of fence will enclose a field 175 rods long an 167 rods wide? (Make a sketch of the field.)

8. What cost 46 boxes of oranges at $7 a box?

9. What number was 756 taken from, if 417 is left?

10. $52—$37=? Make a problem for this example.

217. 1. Add 756, 3767, 574, 375, 6767 and 576.

2. From 93856 take 77547.   3. Multiply 65364 by 8.

4. Divide 94473 by 6.   5. Find $\frac{1}{5}$ of 69435.

6. At $65 an acre, what will 10 acres of land cost?

7. If it takes 6 ounces of silver to make one cup, how many can be made from 5 pounds of silver?

8. In **Liquid Measure**: 4 *gills* (*gi.*) = 1 *pint* (*pt.*), 2 *pints* = 1 *quart* (*qt.*), 4 *quarts* = 1 *gallon* (*gal*).

9. How many pt. in a gallon? How many gi. in a quart? in a gallon? How many pt. in 2 gal. 3 qt?

10. Find $\frac{5}{6}$ of $738. Make a problem for this example.

11. Count by *sevens* from 2 to 65; from 4 to 67.

218. 1. Add 17667, 6746, 73547, 7523, 6074, 37437, 7216, 6775, 27576, 6775 and 5727.

2. Take 76872 from 90380.   3. Multiply 65264 by 9.

4. Divide 77490 by 6.   5. Find $\frac{1}{6}$ of 73580.

6. A jeweler sold a watch and chain for $130; if his profit was $37, how much did they cost him?

7. A man bought 3 farms of 160 acres each; he then sold 277 acres; how many acres were left?

8. How many tons of coal at $5 a ton, are worth as much as 7 cords of wood at $6 a cord?

9. How would you add 15 and 17 without writing the numbers? Add 23 and 16; 27, 12 and 16.

10. What cost 7 quarts of milk at 5 cents a pint?

219. 1. A jeweler sold a watch for $36, gaining $7; how much did it cost?

2. Harry gathered 28 quarts of strawberries; how many had he left after selling $\frac{1}{4}$ of them?

3. A dealer bought 358 tons of salt, then sold 175 tons from the lot; how much had he left?

4. What cost 10 horses at $160 each?

5. How many gallons in 256 pints?

6. Add 1677, 6572, 576, 7727, 706, 673, 7277 and 773.

7. From 73654 take 65467. 8. Multiply 6465 by 9.

9. Divide 56032 by 6. 10. Find $\frac{5}{6}$ of 5376.

220. 1. Add 7107, 52072, 673, 72574, 6757, 712, 724, 377, 5676 and 73275.

2. From 10375 take 7747. 3. Multiply 16560 by 8.

4. Divide 17879 by 6. 5. Find $\frac{5}{6}$ of 3942.

6. A dealer sold 76 tons of coal at one time, 157 tons at another, and 375 tons at a third, and had 476 tons left; how much had he at first?

7. $\frac{1}{4}$ of $268 is how much less than $\frac{1}{5}$ of $955?

8. 6 barrels of flour cost $45; find the price per barrel.

9. John and Harry each had 42 marbles; John gave Harry $\frac{1}{6}$ of his; how many had each then?

10. 9 oranges at 4 cents each, will pay for how many lemons at 3 cents each?

221. 1. Add 5673, 7147, 36750, 5747, 56307, 7327, 675, 7214, 67437, 5747 and 7376.

2. From 90401 take 76377. 3. Multiply 6564 by 4; by 7.

4. Divide 28304 by 6. 5. Find $\frac{1}{6}$ of 731004.

6. A man having $100, paid out $26 at one time, and $37 at another; how much had he left?

7. A farmer had 17 horses, 26 cows, and 6 times as many sheep as cows; how many head of stock had he?

8. A man paid for three horses $76, $125, and $175 respectively; find the cost of all; the average price.

9. What cost 10 bushels of corn at 65 cents a bushel?

10. What cost 3 gallons of currants at 5 cents a quart?

Multiplication.

Table.	**Exercises.—**			
1×7=	I.	II.	III.	IV.
2×7=	2	4	10	10
3×7	5	7	8	5
4×7=	4	5	5	15
5×7=	6	3	9	20
6×7=	3	6	3	4
7×7=	5	2	8	14
8×7=	7	5	7	3
9×7=	4	7	4	13
10×7	6	6	9	30

222. 1. Learn the Table to 7×7.

2. Copy columns I. and II.; multiply *seven* by each number.

3. What will 5 pencils cost at 7 cents each?

4. How many days in 6 weeks?

5. A boy paid $7 for a chain, and four times as much for a watch; how much did both cost?

6. Tom is 7 years old, and his father is 7 times as old; how much older is he than Tom?

7. Add 723, 647, 375, 1724, 677, 576, 567 and 476.

8. Take 7676 from 9248. 9. Multiply 6577 by 5.

10. Multiply $747 by 6. 11. Divide 17305 by 6.

223. 1. Learn the Table to 10×7.

2. Copy columns III. and IV.; multiply *seven* by each number

3. At $7 each, what cost 8 railroad tickets?

4. What cost 9 hats at $7 each?

5. At $17 each, what cost 10 suits of clothes?

6. Six times $7 are how many times $4?

7. Multiply $37 by 7. Make a problem.

8. Add $736, $577, $327 and take away $776.

9. How many are 10×$7? 2×$7? 20×$7?

10. A man paid $\frac{1}{6}$ of his money for a hat which cost $7; how much had he left?

11. Take 7737 from 9382. 12. Find $\frac{5}{6}$ of 9360.

13. $18 are 2 fifths of how much?

224. 1. Add 7376, 567, 6375, 7371, 6547, 726 and 747.

2. Take 67376 from 81706. 3. Multiply 63566 by 7.

4. Divide 15376 by 6. 5. Find $\frac{1}{6}$ of $\frac{1}{5}$ of 7325.

6. Learn the **Table for Time.** —

60 *seconds* = 1 *minute*
60 *minutes* = 1 *hour*
24 *hours* = 1 *day*
7 *days* = 1 *week*
30 *days* = 1 *month*
365 *days* = 1 *year.*

7. How many minutes in 6 hours and 27 minutes?

8. How many seconds in 7 minutes?

9. How many minutes in $\frac{3}{5}$ of an hour?

10. How many days in 5 years and 2 months?

225. 1. Add 573, 6757, 475, 7746, 675, 767 and 7576.

2. From 61390 take 47757. 3. Multiply 36566 by 9.

4. Divide 16380 by 6. 5. Find $\frac{1}{6}$ of 69480.

6. A boy had 55 cents, which was 17 cents more than his sister had; how much had she?

7. A drover sold 756 head of cattle from a drove of 1150; how many were left in the drove?

8. Six oranges were sold for 45 cents, and 15 cents were gained; how much did they cost a piece?

9. How many days in 8 years?

10. How do you multiply a number by 10? How many are 10 times 6? 10 times 60? 10 times 46? 20 × 6? 20 × 60?

226. 1. Add 73067, 17746, 6577, 7306, 5775, 37657, 6775, 16476, 7757 and 6775.

2. Take 65366 from 81075. 3. Multiply 65646 by 8.

4. Divide 103670 by 6. 5. Find $\frac{1}{6}$ of $\frac{1}{4}$ of 7268.

6. A train runs 16 miles an hour; how far will it run in $\frac{1}{4}$ of a day? in $\frac{3}{4}$ of an hour?

7. John had $1; he spent $\frac{1}{5}$ of it for a slate, and $\frac{1}{2}$ of the remainder for a knife; how much was left?

8. What cost 8 pairs of boots at $5 a pair, and 7 pairs of shoes at $6 a pair?

9. A man died in 1863, aged 56 years; in what year was he born?

10. Find $\frac{1}{5}$ of the sum of $364 and $436.

227. 1. Add 70377, 27473, 52706, 17475, 7377, 26757, 7473, 6757 and 17476.

2. Take 7376 from 16578.
3. Multiply 7757 by 8.

4. Divide 35376 by 6.
5. Find $\frac{3}{5}$ of 19460.

6. At $27 a ton, what will 8 tons of hay cost?

7. A lady earns $680 a year, and pays out $\frac{3}{4}$ of it for board; how much of her salary remains?

8. Harry had 28 marbles; Will said to him, "Give me $\frac{1}{4}$ of yours, and I shall have 24." How many had Will?

9. John sold 27 chickens from his flock of 53, then bought 17 more; how many has he now?

10. If $37 equal $\frac{1}{4}$ of my money, how much have I?

228. 1. Add 3767, 727, 576, 714, 377, 767 and 756.

2. From 10850 take 7477.
3. $7375 \times 7 = ?$

4. Find $\frac{1}{6}$ of $\frac{1}{3}$ of 93762.
5. Multiply 77476 by 9.

6. A man earns $24 a week, and spends $17 a week; how much will he save in 9 weeks?

7. Eight times 27 are how many times 6?

8. What cost 9 pounds of coffee at 27 cents a pound?

9. A's farm is worth $7500, B's is worth $\frac{1}{2}$ as much; how much are both worth?

10. How many days in 7 years and 175 days?

11. Two numbers together equal 769; one of them is 374, what is the other?

229. 1. Add 7047, 6773, 17477, 72737, 67406, 7307, 7077, 37672, 14707 and 14707.

2. From 208403 take 77476.
3. Multiply 7673 by 6.

4. Divide 173675 by 6.
5. Find $\frac{1}{6}$ of $\frac{1}{4}$ of 7316.

6. There are 27 cubic feet in a cubic yard; how many cubic feet in 8 cubic yards?

7. A farmer sold 7 loads of oats, averaging 47 bushels each; how many bushels did he sell?

8. What cost 9 horses at $147 each, and 8 mules at $75 each?

9. $763 are how much less than $1700?

10. 477 are 726 less than how many?

11. What cost 5 lb. 8 oz. of butter at 20 cents a pound?

Division.

Tables.—			**Exercises.—**	
I.	II.	III.	I.	II.
7÷7=	1÷7=0, +1	$\frac{1}{7}$ of 1=$\frac{1}{7}$	14	7
14÷7=	2÷7=0, +2	$\frac{1}{7}$ of 2=$\frac{2}{7}$	35	8
21÷7=	3÷7=	$\frac{1}{7}$ of 3=$\frac{3}{7}$	28	15
28÷7=	Etc.	$\frac{1}{7}$ of 4=	42	35
35÷7=	7÷7=1	$\frac{1}{7}$ of 5=	21	34
42÷7=	8÷7=1, +1	$\frac{1}{7}$ of 6=	63	22
49÷7=	Etc., to	$\frac{1}{7}$ of 7=1	49	13
56÷7=	68÷7=9, +5	Etc., to	70	16
63÷7=	69÷7=	$\frac{1}{7}$ of 69=9$\frac{6}{7}$	56	12
70÷7=	70÷7=	$\frac{1}{7}$ of 70=10	63	18

230. 1. Learn Table I.

2. Copy column I.; divide each number by *seven;* find *one seventh* of each.

3. A boy having 35 cents, paid out $\frac{1}{7}$ of his money for a copy-book; how much had he left?

4. If you have 70 cents, how many 7-cent balls can you buy?

5. How many times $7 are there in $56? in $42?

6. What cost 9 books at 70 cents each?

7. Add the numbers 20 to 27 and 30 to 37.

8. Take 7673 from 10050. 9. Multiply 2737 by 9.

10. Divide 63749 by 7. 11. Find $\frac{1}{7}$ of 98637.

231. 1. Learn Table II., to 49÷7, and Table III. to $\frac{1}{7}$ of 49.

2. Divide each number in column II. by *seven;* find *one seventh* of each?

3. 7 hats cost $56; what was the price of each?

4. How many weeks are there in 40 days?

5. Having $30, how many calves at $7 each can you buy?

6. If you have 45 cents, how many pencils at 7 cents each can you buy?

7. How many times $7 in $30? what is $\frac{1}{7}$ of $30?

8. 7 wagons cost $388; what was the price of each?

9. Multiply 73761 by 9. 10. Divide 3747 by 7.

11. Add 727, 3075, 1727, 4775, 637, 747 and 676.

232. 1. Learn Table II. to 70÷7, and Table III. to $\frac{1}{7}$ of 70.

2. Make a column like II.; divide each number by *seven;* find *one seventh* of each.

3. How many times 7 are 8 times 6?

4. Find $\frac{1}{7}$ of \$84. Make a problem for this example.

5. How many weeks in 100 days?

6. When 7 horses cost \$490, what is the average price?

7. What cost 9 yards of cloth at 75 cents a yard?

8. What is the average price, if 7 mules cost \$475?

9. If a man sells a horse for \$112, then pays $\frac{1}{7}$ of the money for a saddle, how much has he left?

10. A boy gathered 2 bushels of chestnuts, which he sold at 70 cents a peck; what did he get for them?

233. 1. Add 737, 7676, 567, 375, 1677, 5767 and 376.

2. Take 73767 from 80590. 3. Multiply 7376 by 9.

4. Divide 39480 by 7. 5. Find $\frac{1}{7}$ of 79460.

6. Find $\frac{1}{7}$ of \$91. Make a problem for this example.

7. A trader bought a horse for \$140, and sold it at a gain of $\frac{1}{7}$ of the cost; find the selling price.

8. Ben read 37 pages on Monday, 43 pages on Tuesday, 27 pages on Wednesday, and as many on the next three days as on the first three; how many in all?

9. 7 yards of cloth are required to make a suit of clothes; how many suits may be made from 47 yards?

10. \$71 are one seventh of how much?

234. 1. Four beeves weigh 765 lb., 1047 lb., 1073 lb., and 776 lb.; how much did they all weigh?

2. Take 67476 from 90403. 3. Multiply 76773 by 8.

4. Divide 67473 by 7. 5. Find $\frac{1}{8}$ of $\frac{1}{7}$ of 19376.

6. Seven men together are worth \$47520; what is their average wealth?

7. How much less than \$750 are \$475?

8. How many days in 27 weeks?

9. I sold 7 sheep at \$5 each, and lost \$6; how much did they cost?

10. What cost 7 pounds of butter at 17 cents a pound?

235. 1. Add 776, 7567, 3727, 5746, 7237, 774, 7507, 3774 667 and 5676.

2. Take 73765 from 92840.   3. Multiply 57372 by 9.

4. Divide 38460 by 7.   5. Find ⅐ of 17864.

6. A man having 937 head of cattle, bought 176 more, then sold 347; how many had he left?

7. In a school there were 356 girls, and 257 boys; if 25 girls and 32 boys leave, how many pupils remain in the school?

8. I bought 5 pounds of butter at 37 cents a pound; how much change I should get for a 5-dollar bill?

9. How many weeks are there 376 days?

10. If 3 oranges cost 21 cents, how much will 8 cost?

236. 1. Add 5073, 7467, 5773, 675, 377, and 776.

2. From 67309 take 47673.   3. Multiply 73276 by 8.

4. Divide 34370 by 7.   5. Find ⅐ of 60470.

6. At $7 a dozen, how many straw hats cost $98?

7. A horse which cost $154, was sold at a loss of ⅐ of the cost; what was the selling price?

8. If 7 men mow a field in 4 hours, how long should it take 5 men?

9. James has 17 marbles, George has 3 times as many, and Will has half as many as both the others; how many has he?

10. Multiply $27 by 6. Make a problem.

237. 1. Add 567, 3075, 7617, 774, 765, 567 and 376.

2. Take 73764 from 91780.   3. Multiply 67740 by 7

4. Divide 88560 by 7.   5. Find ⅐ of 33742.

6. How many hours in a week?

7. At 7 cents a dozen, how many dozen eggs will pay for 9 yards of cloth at 14 cents a yard?

8. How many weeks in the last 3 months of the year? In two years?

9. Divide $350 by $7. Make a problem.

10. 20 things make a score; how many are 7 score?

11. Count by *sevens* from 6 to 97; from 9 to 100.

12. Write 27, 16, 37, 72, 25, 57, 56, 71, 34, 75 and 67 on a *line;* add the numbers.

238. 1. Add 72507, 7675, 27467, 74773, 51617, 75076, 7767, 75576, 73675 and 7757.

2. Take 275787 from 74000.

3. Multiply 7757 by 9.

4. Divide 34675 by 7.

5. Find $\frac{1}{7}$ of 53263.

6. How many rods of fence will enclose a field 175 rods long and 167 rods wide?

7. What cost 76 boxes of oranges at $7 a box?

8. How much will be left, if $1277 be taken from six times $573?

9. What number was 756 taken from, if 417 were left?

10. Seven men together are worth $92302; what is their average wealth?

239. 1. Add 7416, 3847, 670, 2717, 7457, 726, 7475, 76712, 5747 and 73576.

2. Take 57476 from 75384.

3. Multiply 67476 by 8.

4. Divide 53567 by 7.

5. Find $\frac{1}{7}$ of 17475.

6. How many weeks in 517 days?

7. A man earned $84; he paid $\frac{1}{7}$ of it for a coat, and $\frac{1}{4}$ of it for a watch; how much had he left?

8. An estate of $35637 was divided equally among 4 sons and 3 daughters; find the share of each.

7. If I have $87, and pay all of it but $10 for sheep at $7 each, how many will I buy?

10. ($14 × 7) — $27 = ? Make a problem.

240. 1. Add 7651, 72507, 27476, 5167, 3675, 75077, 37767, 7576, 35067 and 6775.

2. Take 77575 from 79403.

3. Multiply 67576 by 8.

4. Divide 31436 by 7.

5. Find $\frac{1}{7}$ of 64321.

6. At 75 cents a yard, what cost 9 yards of cloth?

7. Sold a house and lot for $1625, losing $175; how much did it cost?

8. Find $\frac{3}{5}$ of $560. Make a problem.

9. I bought 7 dozen eggs at 15 a dozen, and handed the clerk $2; how much change did I get?

10. What cost 8 horses at $275 each?

11. 7 mules cost $576; find the average cost.

241. 1. Add 576, 7367, 4075, 7507, 63771, 74657, 7476 36757, 56734, 67347 and 6776.

2. From 67470 take 56747.
3. Multiply 74767 by 7.

4. Divide 39476 by 7.
5. Find $\frac{2}{7}$ of 588.

6. A boy earned $28, then paid $\frac{2}{7}$ of it for a suit of clothes; how much had he left?

7. Multiply 567 by 6, and divide the product by 7.

8. A man left an estate of $25800; his widow received $\frac{1}{3}$ of it, and the remainder was divided equally among seven children; how much did each receive?

9. $(\$26\times5)+(\$37\times8)=?$ Make a problem.

10. Find $\frac{3}{7}$ of $350. Make a problem.

242. 1. Add 6747, 575, 47327, 56577, 3726, 7674, 56747, 7573, 6747, 37276 and 5776.

2. From 90825 take 77376.
3. Multiply 67473 by 8.

4. Divide 46450 by 7.
5. Find $\frac{4}{7}$ of 399 bushels.

6. A man bought 8 horses at $76 each, and sold them all for $785; how much did he gain?

7. A sum of money divided among 6 men gives each $42; if there were 7 men, how much would each get?

8. How do you multiply a number by 10? $10\times75=?$

9. At $70 each, what cost 4 wagons? 14 wagons?

10. There are 365 days in a year; how many weeks in two years?

243. 1. Add 3727, 577, 7465, 3767, 74573, 6742, 7376, 16747, 63727, 7564 and 776.

2. Take 57473 from 85090.
3. Multiply 73707 by 9.

4. Divide 59470 by 7.
5. Find $\frac{5}{7}$ of 6160.

6. If $\frac{1}{7}$ of my money is $574, how much have I?

7. If I earn in 7 months respectively $65, $57, $45, $56, $75, $74 and $67, what is the amount of my average monthly wages?

8. What cost 10 acres of land at $67 per acre?

9. A man has $240; how many calves at $7 a head, can he buy?

10. $(\$75\times9)-\$175=?$ Make a problem.

VIII. THE NUMBER EIGHT.

Addition.

Table	**Exercises.**—			
1+8=	I.	II.	III.	IV.
2+8=	2	21	9	8
3+8=	4	16	7	7
4+8=	6	23	10	8
5+8=	3	15	8	5
6+8=	5	11	19	8
7+8=	11	14	17	8
8+8=	12	34	28	6
9+8=	5	25	39	8
10+8=	13	22	44	(?)

244. 1. Learn the Table to 6+8.

2. Copy columns I. and II; add *eight* to each number.

3. There are 5 boys in one class, 8 in another, and 8 more in a third; how many in all?

4. How many are $14 and $8? $24 and $8? 14+18?

5. A girl paid 65 cents for some books, and 8 cents for some pencils; how much for all?

6. George paid $12 for a suit of clothes, and had $8 left; how much had he at first?

7. Take 7677 from 15680.

8. Multiply 7675 by 5.

9. Divide 19736 by 7.

10. Find $\frac{1}{7}$ of 3765.

245. 1. Learn the Table to 10+8.

2. Add *eight* to each number in column III.

3. Add column IV.; say *one* and add; *two;* etc.

4. If you read 18 pages to-day, 8 to-morrow, and 18 the day after, how many do you read in all?

5. How would you add 15 and 18 without writing the numbers? Add 23, 18 and 8.

6. Count by *eights* from 1 to 81; from 3 to 83.

7. There are 27 passengers in one car, 28 in another, and 18 in a third; how many in all?

8. Add $\frac{1}{5}$ of $905 and $\frac{1}{6}$ of $1440.

246. 1. Count by *eights* from 3 to 83; from 6 to 83.

2. How many inches in a yard and a half?

3. How many weeks in 56 days? in 140 days?

4. A grocer buys butter at 18 cents a pound, and sells it at 25 cents; what is his gain on 10 pounds? 20 pounds?

5. A boy having 27 dollars lacks how much of having enough to buy a pony worth 45 dollars.

6. Find $\frac{3}{7}$ of $84. Make a problem for this example.

7. $15 are $\frac{3}{5}$ of how much? Make a problem.

8. Add $758, $836, $1848, $787, $4768 and $787.

9. Multiply 67745 by 8. 10. Divide 46547 by 7.

247. 1. Add 80378, 18468, 7880, 17487, 60807, 8580, 18368, 7805, 8638 and 72887.

2. Take 75767 from 100080. 3. Multiply 76754 by 4.

4. Divide 83600 by 7. 5. Find $\frac{1}{4}$ of $\frac{1}{7}$ of 64449.

6. In **Dry Measure**: 2 *pints* (*pt.*) = 1 *quart* (*qt.*),
8 *quarts* = 1 *peck* (*pk.*),
4 *pecks* = 1 *bushel* (*bu.*).

7. How many pt. in a pk.? in a bu.? in 3 bu.?

8. What cost 10 gal. of molasses at 75 cents per gal.?

9. After spending $\frac{2}{3}$ of $78, how much had I left?

10. What was the cost of a cow which was sold for $75 at a gain of $17?

248. 1. Add 8406, 7858, 80388, 178, 548, 6884, 80385, 876, 7828, 8588 and 1583.

2. From 178804 take 77675. 3. Multiply 76747 by 9.

4. Divide 216404 by 7. 5. Find $\frac{1}{7}$ of 90008.

6. A boy had $18, earned $24 more then paid out $27 for a suit of clothes; how much had he left?

7. Bought 9 desks at $17 each; what was the cost?

8. How many days in 37 weeks?

9. There 160 square rods in an acre; how many square rods are there in 10 acres?

10. $76 are $\frac{1}{7}$ of how much?

11. How many 7-cent pencils will 5 quarters buy?

12. How many inches in two yards and a half?

249. 1. Add 2687, 858, 8547, 7878, 78387, 6878, 5508, 78385, 7858 and 73787.

2. Take 78573 from 92765. 3. Multiply 77467 by 9.

4. Divide 83275 by 7. 5. Find $\frac{5}{7}$ of 3948.

6. Find $\frac{1}{7}$ of 9 times $367.

7. What cost 7 bushels of potatoes at 75 cents a bushel, and 9 pounds of butter at 17 cents a pound?

8. There are 160 square rods in an acre, how many square rods in 8 acres? in 80 acres?

9. How many weeks in a year and 217 days?

10. If 75 cents are $\frac{1}{6}$ of my money, how much have I?

250. 1. Add 3587, 8378, 67885, 8478, 3885, 7086 78508, 63087, 8576 and 37887.

2. From 74563 take 67747. 3. Multiply 75377 by 8.

4. Divide 97365 by 7. 5. Find $\frac{4}{7}$ of 9450.

6. A farmer having 1568 sheep, sold $\frac{2}{7}$ of them; how many had he left?

7. $7280 were paid for 7 acres of land; how much would 4 acres of the same cost?

8. How much will a man have left of $7567, after paying out $\frac{3}{7}$ of it?

9. What cost 9 pianos at $375 each?

10. ($35×9)—($24×9)=? Make a problem.

251. 1. Add 8007, 5818, 87684, 8378, 7857, 8688, 7684, 8048, 87887 and 8388.

2. Take 67475 from 80107. 3. Multiply 77076 by 7.

4. Divide 34387 by 7. 5. Find $\frac{6}{7}$ of 6566.

6. A has $2632, and B has $\frac{4}{7}$ as much; how much have they both?

7. How many calves at $7 each, are worth as much as 9 cows at $35 each?

8. If 7 men build a bridge in 12 days, how long should it take 6 men?

9. ($56×4)÷7=? Make a problem.

10. Sold a horse for $275, losing $57; find the cost.

11. 8×$56 are how many times $7?

Subtraction.

Table.	**Exercises.—**			
	I.	II.	III.	IV.
8—8=				
9—8=	9	23	15	23
10—8=	19	11	26	15
11—8=	10	31	11	24
12—8=	20	29	17	12
13—8=	13	22	27	19
14—8=	11	40	16	45
15—8=	21	32	31	16
16—8=	18	13	13	14
17—8=	22	21	19	32

252. 1. Learn the Table to 13—8.

2. Copy columns I. and II.; take *eight* from each number.

3. Twenty-two boys are 8 more than how many boys?

4. Tom is 13 years old; how old was he 8 years ago?

5. A girl who had 21 oranges, gave away 8 of them; how many had she left?

6. Ben misspelled 8 words of a sentence containing 31 words; how many did he spell correctly?

7. How many are 9 times $6, +$8? 7×$4, +$5?

8. A man bought a carriage for $278, and sold it for $320; how much did he gain?

9. Multiply $\frac{1}{6}$ of 1482 by 7. 10. $144 are $\frac{3}{4}$ of how much?

253. 1. Learn the Table to 17—8.

2. Copy columns III. and IV.; take *eight* from each number.

3. 8 boys leave a group of 15; how many remain?

4. Robert said: "If I had 18 more marbles, I should have 50"; how many had he?

5. A grocer sold 168 pounds of sugar from a barrel containing 316 pounds; how many pounds were left in the barrel?

6. 99 feet are 87 feet more than how many?

7. Multiply 7376 by 9. 8. Divide 4473 by 7.

9. Take 67376 from 85790. 10. Find $\frac{5}{7}$ of 2324.

11. 8 times $7 are how many times $6?

12. What costs 7½ lb. of butter at 30¢ a pound.

254. 1. Subtract *eights* from 80 to 0; from 83 to 3; from 87 to 7.

2. John bought 105 marbles; he sold 28, and lost 18; how many had he left?

3. Three times $20 are how many times $7?

4. What cost 8 acres of land, at $75 per acre?

5. A man paid $178 on a debt of $580; how much of the debt did he still owe?

6. Four men are worth respectively, $7500, $8680, $8500 and $12850; how much are they all worth?

7. Add 848, 783, 578, 648, 785, 1875, 378 and 3876.

8. Take 78586 from 92000. 9. Multiply 73767 by 7.

10. Find $\frac{1}{7}$ of $9345. Make a problem.

255. 1. Add 784, 386, 878, 1854, 8708, 870, 688, 1187, 1278, 873, 578 and 2087.

2. From 70305 take 68758. 3. Multiply 76775 by 6.

4. Divide 40070 by 7. 5. Find $\frac{1}{5}$ of $\frac{1}{7}$ of 7875.

6. A man owning 616 acres of land, sold $\frac{1}{7}$ of it; how much had he left?

7. If $8610 be divided equally among 7 children, how much will each receive?

8. If I buy 60 marbles, give $\frac{1}{5}$ of them to Harry, and $\frac{1}{6}$ of them to Will, how many have I left?

9. 873 men are how many more than 586 men?

10. 3 times 76 are how many times 6?

256. 1. Add 8738, 6785, 80348, 72886, 6875, 878, 78386, 6858, 18878 and 8084.

2. From 96300 take 68480. 3. Multiply 70376 by 9.

4. Divide 39406 by 7. 5. Find $\frac{1}{6}$ of 20000.

6. How many eggs in 8 baskets, if there are six dozen in each?

7. If a man earn $75 a month, how much will he earn in 10 months? in 20 months?

8. How many square inches in a square yard?

9. How many days in 7 years and 186 days?

10. How many hours in 9 days?

11. $175 are seven times how many dollars?

257. 1. Add 2687, 5385, 87548, 78487, 65378, 7586, 387, 6578, 73884, 68388 and 7587.

2. Take 78387 from 95004. 3. Multiply 73674 by 9.

4. Divide 193786 by 7. 5. Find $\frac{1}{7}$ of 59836.

6. A man bought 9 horses at $175 each, and sold them at $210 each; how much did he gain?

7. How much will a man have left of $7560, after paying out $\frac{1}{7}$ of it?

8. At $275 each, what cost 8 pianos?

9. $746 are $286 more than how much?

10. Find $\frac{5}{7}$ of $350. Make a problem.

258. 1. Add 7867, 75382, 83568, 8087, 27883, 8578, 7886, 80708, 6758 and 83787.

2. From 75608 take 38787. 3. Multiply 70367 by 8.

4. Divide 59836 by 7. 5. Find $\frac{1}{7}$ of 97360.

6. Learn the **Table for Avoirdupois Weight**:

16 *ounces* (*oz.*)=1 *pound* (*lb.*), 2000 *pounds*=1 *ton* (*T.*).

How many pounds in 3 tons? How many ounces in 3 pounds and 8 ounces? in a ton?

7. How many inches in 8 feet? in 18 feet?

8. What part of a pound are 8 ounces? 12 ounces?

9. Subtract *eights* from 85 to 5; from 83 to 11.

10. How many weeks in 114 days?

259. 1. Add 787, 3858, 866, 7838, 8583, 878, 6785, 876, 778 and 8787.

2. Take 78768 from 108376. 3. Multiply 76367 by 6.

4. Divide 74560 by 7. 5. Find $\frac{1}{6}$ of $\frac{1}{7}$ of $4550.

6. How many dozen eggs, at 7 cents a dozen, will pay for 5 yards of cloth, at 14 cents a yard?

7. In **United States Money**, 10 *mills*=1 *cent*, 10 *cents*=1 *dime*, 10 *dimes*=1 *dollar*. How many dimes in 7 dollars? How many cents in $15? How many 'quarters' in 9 dollars?

8. A clerk's salary is $85 a month, and his expenses are $48; how much may he save in 9 months?

9. What cost 7 yards of cloth, at 75 cents a yard?

10. At 7 cents a yard, how many yards of cloth cost 3\frac{1}{2}$?

Multiplication.

Table.	**Exercises. —**			
1×8=	I.	II.	III.	IV.
2×8=	2	7	9	10
3×8=	4	5	7	20
4×8=	3	3	10	5
5×8=	5	6	8	15
6×8=	7	4	3	12
7×8=	6	7	9	25
8×8=	4	5	6	13
9×8=	5	6	8	30
10×8=	7	2	7	50

260. 1. Learn the Table to 7×8.

2. Multiply *eight* by each number in columns I. and II.

3. What cost 6 yards of cloth at 8 cents a yard?

4. How many quarts in 7 pecks?

5. Each side of a square is 8 inches long; what is the length of all of its sides?

6. What cost 3 tons of hay at $18 a ton?

7. A farmer harvested 85 bushels of wheat from each acre of a field containing 5 acres, how many bushels had he after selling 178 bushels?

8. Find 6 times $\frac{1}{2}$ of 976 dollars.

9. Multiply 828 by 3. 10. Multiply 1728 by 5.

261. 1. Learn the Table to 10 × 8.

2. Multiply *eight* by each number in columns III. and IV.

3. What cost 8 dozen eggs at 8 cents a dozen?

4. A boy gets $8 a week for his work; how much will he earn in 7 weeks?

5. How many times $4 are 9 times $8?

6. What cost 10 cords of wood at $8 a cord?

7. There are 128 cubic feet in a cord of wood; how many cubic feet in 6 cords?

8. Multiply 2838 by 7. 9. Multiply $838 by 8.

10. Multiply $38 by 9. Make a problem.

11. Nine times $15 are how many times $7?

262. 1. Add 848, 783, 8685, 7858, 786, 1658, 1856, 817, 783, 1856, 8588 and 787.

2. Take 83768 from 91865. 3. Multiply 68583 by 7.

4. Divide 90385 by 7. 5. Find $\frac{1}{7}$ of 38736.

6. A house bought for $5600, was sold at a gain of $\frac{1}{7}$ of the cost; how much was it sold for?

7. $3654 are $\frac{1}{7}$ of how much?

8. If you have but $150, how many sheep, at $8 a head, can you buy?

9. 783 was taken from what number to leave 587?

10. Two men start from the same place and travel the same direction, one at the rate of 28 miles a day, the other at the rate 41 miles a day; how far apart are they at the end of 8 days?

263. 1. Add 787, 587, 386, 878, 584, 7868 and 887.

2. From 100460 take 83585. 3. Multiply 57878 by 8.

4. Divide 54305 by 7. 5. Find $\frac{5}{7}$ of $924.

6. A man has how much of $7567 left after spending $\frac{1}{7}$ of it? after spending $\frac{5}{7}$ of it?

7. 8 times $27 are how many times $6?

8. How many ounces in 9 pounds and 8 ounces?

9. 7 men build a wall in 4 days; how long should it take one man? six men?

10. $35 are $\frac{5}{7}$ of how much? Make a problem.

264. 1. Add 877, 8586, 738, 587, 3828, 768 and 587.

2. From 170594 take 87586. 3. Multiply 85876 by 9.

4. Divide 59387 by 7. 5. Find $\frac{3}{7}$ of $9891.

6. Count by *eights* from 3 to 75; from 7 to 87.

7. Subtract *eights* from 85 to 13; from 82 to 10.

8. A man sold a farm, and with $\frac{1}{4}$ of the money bought a house and lot costing $1750; how much did he get for the farm?

9. Thomas has $2; he owes Richard 68 cents, and Harry 83 cents; after paying them, how much will he have?

10. A farmer bought a horse and two mules for $563; each mule cost $165, how much did the horse cost?

11. A paid $\frac{6}{7}$ of his money for a horse, and had $75 left; how much did the horse cost?

265. 1. Add $3.25, $18.14, $7.63, $35.85, $7.28, $2.82, $26.80 and $17.35.

2. Take 38786 from 93090.   3. Multiply 8784 by 9.

4. Divide 96085 by 7.   5. Find ⅐ of 100856.

6. Multiply 484 by 2; by 25; by 68.   (S. 16.)

7. A lady having $176, spent ¼ of it for a watch; how much did the watch cost?

8. Will has $3; if he pays John for 6 chickens at 18 cents each, how much will he have?

9. I paid $18 for a saddle, and 4 times as much for a pony; how much did I pay for both?

10. 9 times 18 cents are how many times 6 cents?

11. How many pencils at 7 cents each cost $3.50?

266. 1. Add $1.37, $3.58, $5.87, $7.54, $8.16 and $3.75.

2. Take $2.85 from $6.25.   3. Multiply $7.86 by 8.

4. Multiply 83872 by 6.   5. Divide 83567 by 7.

6. What cost 9 tons of iron at $28 a ton? 36 tons?

7. 4 loads of coal weigh 2786 pounds, 2278 pounds, 2875 pounds, and 2668 pounds; find the average weight.

8. Find ⅕ of the answer to example 1.

9. How many dozen eggs, at 6 cents a dozen, will pay for eight yards of cloth at 15 cents a yard?

10. A man sold a farm, and with ⅕ of the money bought a house and lot for $1885; how much did he get for the farm?

267. 1. Add $78.36, $2.28, $7.85, $8.17, $6.48 and $5.87.

2. From $75.90 take $68.50.   3. Multiply 587 by 32.

4. Multiply $8.78 by 19.   5. Find ⅐ of 95078.

6. In one school there are 287 pupils, in another three times as many; how many in both?

7. At $78 per acre, what cost 9 acres of land? 45 acres?

8. Learn the **Table for Long Measure**:

12 *inches* (*in.*)=1 *foot* (*ft.*),
3 *feet* =1 *yard*
16½ *feet*, or 5½ *yards*,=1 *rod* (*rd.*),
5280 *feet*, or 1760 *yards*, or 320 *rods*=1 *mile* (*mi.*).

9. How many yd. in 7 mi? in 20 rd.? how many ft.?

Division.

Tables. —			Exercises. —	
I.	II.	II.	I.	II.
8÷8=	1÷8=0, +1	$\frac{1}{8}$ of 1$=\frac{1}{8}$	16	8
16÷8=	2÷8=0, +2	$\frac{1}{8}$ of 2$=\frac{1}{4}$	32	9
24÷8=	3÷8=0, +3	$\frac{1}{8}$ of 3$=\frac{3}{8}$	56	16
32÷8=	4÷8=0, +4	$\frac{1}{8}$ of 4$=\frac{1}{2}$	24	18
40÷8=	5÷8=	$\frac{1}{8}$ of 5=	40	25
48÷8=	6÷8=	$\frac{1}{8}$ of 6=	80	35
56÷8=	7÷8=	Etc., to	48	40
64÷8=	8÷8=	$\frac{1}{8}$ of 78$=9\frac{3}{4}$	64	37
72÷8=	Etc., to	$\frac{1}{8}$ of 79$=9\frac{7}{8}$	72	23
80÷8=	80÷8=	$\frac{1}{8}$ of 80=	64	19

268. 1. Learn Table I.

2. Copy column I., divide each number by *eight;* find *one eighth* of each.

3. How many pecks are there in 48 quarts?

4. How many pounds of grapes, at 8 cents, cost $2?

5. If 8 sheets of paper make one book, how many books will 96 sheets make?

6. There are 248 acres of land in 8 equal fields; how many acres in each field?

7. Add 787, 868, 758, 87, 386, 2876, 688 and 787.

8. Multiply 8786 by 75. 9. Take 8785 from 9392.

10. Multiply $2.80 by 15. Make a problem.

269. 1. Learn Table II. to 48÷8, and Table III. to $\frac{1}{8}$ of 48.

2. Copy column II., divide each number by *eight;* find *one eighth* of each.

3. I have 45 cents; how many 8-cent books can I buy?

4. 8 pairs of shoes cost $30; find the price per pair.

5. $348 were paid for 8 cows; find the average cost.

6. 8 coats cost $96; how much will 5 cost?

7. Add $7.85, $13, $6.40, $8.68, $9, $7.56 and $3.88.

8. Take $78.38 from $119. 9. Multiply $87.36 by 18.

10. Divide $17.60 by 8 cents. Make a problem.

11. 24=\frac{3}{5}$ of my money; how much have I?

270. 1. Learn Table II. to 80÷8, and Table III. to ⅛ of 80.

2. Make a column like II.; divide each number by *eight;* find *one eighth* of each?

3. At $8 each, how many sheep cost $72? $112?

4. Five men can build a fence in 6 days; how long should it take 8 men?

5. There are 196 pounds in a barrel of flour; after ⅛ of a barrel is taken out, how much remains?

6. 8 saddles cost $120; what was the price of each?

7. Find ⅛ of 9 times 280. 8. Take $88.68 from $95.70.

9. Multiply $368 by 7; by 265. 10. Find ⅐ of ¼ of 7736.

271. 1. Add $178.50, $46.85, $74.58, $386.17, $58 and $34.86.

2. Multiply 5837 by 46; by 235. 3. Find ⅛ of $84.56.

4. What cost 12 pianos at $385 each?

5. $168 taken from what amount leaves $387?

6. There are 5280 feet in a mile; how many in 2 miles?

7. How many ounces are there in 10 pounds? 35 pounds?

8. How many are 8 times one half? 8 times 5? 8 times 5½? How many feet in 8 rods?

9. A farmer's wife sold 8 rolls of butter, each weighing a pound and 8 ounces; how much did it all weigh? How much was it worth, at 18 cents a pound?

10. How many bushels in 216 quarts?

272. 1. Add 7806, 83680, 65048, 17858, 8781, 878, 18684, 83680, 7858 and 12787.

2. Take $73.80 from $81. 3. Multiply $78.86 by 5.

4. Divide $148307 by 8. 5. Find ⅛ of $79.36.

6. If 7 hats cost $56, how much will 9 cost?

7. Joe has 38 marbles, Tom 32, Ben 28; they divide them equally among themselves; how many will each have?

9. There are 78 pages in one story, 80 in a second, 56 in a third, and 82 in a fourth; in how many days can you read them all, reading 8 pages a day?

10. How many bushels of wheat in 6 bins, each containing 180 bushels?

11. How many rods in 12 miles? in 25 miles?

273. 1. Add $27.85, $38.57, $85.70, $368.58, $87.80, $578.68, $38.57 and $85.88.

2. From $31.90 take $18.78. 3. Multiply $8.78 by 26.

4. Divide 39768 by 8. 5. Find ⅛ of $76.48.

6. A grocer sold 9 dozen eggs at 15 cents a dozen, losing 8 cents on each dozen; find the cost.

7. What cost 38 tons of coal at $6.85 a ton?

8. There are 45 pounds of tea in the chest; how much is it worth at 58 cents a pound?

9. If you sell a bushel of peanuts at 8 cents a quart, how much money will you get?

10. How many 8-foot cords can you cut from a cord 15 yards in length?

274. 1. Add $8.17, $28.80, $5.68, $8.64, $7.48 and $8.78.

2. Take $87.83 from $104. 3. Multiply $83.07 by 5.

4. Divide 93760 by 8. 5. Find ⅜ of $12.40.

6. $8.56 × 17 = ? Make a problem.

7. Count by *eights* from 8 to 96; from 11 to 91.

8. At a church collection $18.50 were taken up in one box, $16.85 in another, $23.48 in a third, and $8.80 in a fourth; how much in all?

9. What cost 28 bushels of wheat at $85 a bushel?

10. How many yards of cloth, at $.08 a yard, cost $2?

275. 1. Add $17.80, $28.68, $3.84, $38, and $12.08.

2. From $76 take $38.85. 3. Multiply $18.75 by 9.

4. Divide 39478 by 8. 5. Find ⅝ of $30.00.

6. 6 men build a wall in four days; how long should it take 8 men?

7. How many quarts are there in 8 bushels?

8. What cost 28 yards of muslin at $.18 a yard?

9. How many feet are there in 5 miles?

10. How many minutes are there in 24 hours?

11. A man bought 9 tons of hay at $5.80 a ton, and sold it at $8 a ton; how much did he gain?

12. Subtract *eights* from 85 to 5; from 95 to 7.

13. How many pecks in 2 bushels and 3 pecks?

277. 1. Add $7.05, $8.38, $5.86, $6.48, $17 and $8.56.

2. Take $37.08 from $50.50. 3. Divide 90327 by 8.

4. Multiply $8.68 by 9; by 37. 5. Find $\frac{1}{8}$ of 187.

6. Take a calendar, and find how many days there are from Washington's Birthday to July 4th.

7. Learn the **Table for Square Measure:**

144 *square inches* (*sq. in.*) = 1 *square foot* (*sq. ft.*),
9 *square feet* = 1 *square yard* (*sq. yd.*),
30$\frac{1}{4}$ *square yards* = 1 *square rod* (*sq. rd.*),
160 *square rods* = 1 *acre* (*A.*),
640 *acres* = 1 *square mile* (*sq. mi.*).

8. Draw a rectangle 8 in. long and 5 in. wide. Divide the figure into square inches; how many square inches in each row? In all?

9. How many sq. ft. in a floor 20 ft. long and 17 ft. wide? in the floor of this room? how many sq. yd.?

278. 1. Add $73.80, $58.68, $8.46, $13.28 and $38.27.

2. From $177 take $85.80. 3. Divide 63756 by 8.

4. Multiply $38.28 by 7. 5. Find $\frac{1}{8}$ $17.68.

6. What cost 32 wagons at $185 each?

7. What cost 18 bushels of potatoes at $.75 a peck?

8. 6 pounds of tea cost $4; find the price per pound.

9. $6.80 are divided equally among 8 boys; how much does each get?

10. What cost 10 tons of coal at $8.25 per ton?

279. 1. Add 858, 8786, 768, 8508, 783, 818 and 787.

2. Take $18.75 from $25. 3. Multiply $18.78 by 29.

4. Divide 79386 by 8. 5. Find $\frac{1}{8}$ of $70.40.

6. What cost 8 pounds of butter at 45 cents a pound, 25 pounds of coffee at 28 cents a pound, and 8 pounds of tea at 38 cents a pound?

7. A man sold 15 hogs at $8.75 each, then paid $\frac{1}{3}$ of the money for a horse; how much had he left?

8. Count by *eights* from 3 to 75; from 7 to 71.

9. Subtract *eights* from 79 to 7; from 75 to 3.

10. 15 times 28 cents are how many times 7 cents?

280. 1. How much will a boy get for 8 bu. of chestnuts, if he sells them at 80 cents a peck?

2. How many square feet in a space 12 feet by 17 feet?

3. 100 acres of land cost how much at $7.75 per acre?

4. I bought 3 bbl. of flour at $3.80 per bbl., 9 lb. of tea at $.68 a pound, and 55 lb. of sugar at 9 cents a pound; what was the amount of the bill?

5. 8 bbl. of salt cost $30; how much will 28 bbl. cost?

6. What will it cost to build a fence around a garden 12 rods long and 8 rods wide, at $2 a rod?

7. A farmer raised 1280 bushels of oats; after selling $\frac{5}{8}$ of his crop, how many bushels had he left?

8. Multiply $7.93 by 25. 9. Divide $91 by $.7.

281. 1. Add 8.75, 9.08, 13.5, 78.068, 12.7 and 9.78.

2. A grocer bought flour at $5.70 per bbl. and sold it at $7.50 per bbl.; find his gain on 29 bbl.

3. A boy having $23.80 lacks how much of enough to buy a bicycle worth $60?

4. What cost 7 lb. of coffee at 35¢, 9 lb. of butter at 27¢, and a gallon of sirup at 85¢?

5. From $115.80 take $87.95. Make a problem.

6. A farmer traded 15 lb. of butter at $.10 a pound, for muslin at 6¢ a yard; how much did he get?

7. Divide $86.40 by 8 cents. Make a problem.

8. Divide $72.80 by $.40. 9. Find $\frac{1}{7}$ of 9×367.

282. 1. Four times $8.85 are how many times $.05?

2. 6 yd. of cloth are required to make 1 suit of clothes; how many suits will 112 yd. make?

3. Multiply 987 by 26. 4. Divide 39786 by 8.

5. What cost 7 lb. 8 oz. of butter at 30¢ a pound?

6. At 40¢ a pound, what cost 5 lb. 4 oz. of butter?

7. How many minutes in 9 hours 38 minutes?

8. How many inches in 8 yards 17 inches?

9. Take $78.39 from 18×$7.45. Make a problem.

10. $84 are $\frac{7}{8}$ of how much? $\frac{6}{13}$ of how much?

11. $150 are $\frac{3}{8}$ of how much? $\frac{6}{7}$ of how much?

IX. THE NUMBER NINE.

Addition.

Table.	**Exercises.** —			
1+9=	I.	II.	III.	IV.
2+9=	2	14	7	9
3+9=	1	24	17	8
4+9=	3	13	9	9
5+9=	5	26	29	7
6+9=	15	4	10	9
7+9=	4	22	20	9
8+9=	6	33	8	6
9+9=	16	55	17	9
10+9=	12	36	28	(?)

284. 1. Learn the Table to 6+9.

2. Copy columns I. and II.; add *nine* to each number.

3. I paid $5 for a hat, and $9 for a coat; how much did I pay for both?

4. A lady paid $4 for coffee, $9 for tea, and $19 for flour; how much did she pay for all?

5. Tom gathered 13 quarts of berries, and Will gathered 9; they divided them equally; how many quarts had each?

6. If 7 tables cost $56, how much does 9 cost?

7. Multiply 7838 by 7. 8. Take $\frac{1}{7}$ of 3927 from 3011.

9. Divide 89798 by 7. 10. Find $\frac{1}{5}$ of $\frac{1}{7}$ of 9324.

285. 1. Learn the Table to 10+9.

2. Copy column III.; add *nine* to each number.

3. Add column IV.; put *one* at the botton; *two*, *three*, etc.

4. There were 17 books on a shelf; I put up 9 more, then took down 8; how many were left?

5. Bryce has 8 chickens, George has 9, and Henry 9; how many have they all together?

6. A boy earned $15 one month, and $19 the next; how much did he earn in the two months?

7. Take 18738 from 30790. 8. Multiply 8378 by 69.

9. Divide 38137 by 8. 10. Find $\frac{1}{8}$ of 60793.

286. 1. Count by *nines* from 2 to 92; from 5 to 95.

2. A man bought a horse for $65, a saddle for $19, and a bridle for $7; how much did they all cost?

3. John has 19 chickens, Harry 8, Joe 9; how many have they together?

4. A man paid $8 for a barrel of flour, $9 for a cask of syrup, and $9 for a caddy of tea; how much change did he get for three 10-dollar bills?

5. A lot cost $980, the house on it, $3890; the furniture in the house, $1875; what was the whole cost?

6. After paying $295 for a carriage, Mr. White had $689 left; how much had he at first?

7. Take 78387 from 90948. 8. Multiply $8.76 by 25.

9. Divide 27386 by 8. 10. Find $\frac{1}{8}$ of $78.

287. 1. Add 89, 268, 399, 894, 908, 897, 99 and 98.

2. From $160 take $87.80. 3. Multiply $165 by 228.

4. Multiply 387 by 547. 5. Find $\frac{1}{8}$ 89739.

6. A farmer sold 37 cattle at $35 a head, and 9 horses at $75 a head; what was the whole amount of the sale?

7. $240 were paid for how many stoves at $8 each?

8. George had $54; his father gave him $\frac{1}{3}$ as much, and he earned $18 more; how much has he now?

9. What cost 7 pieces of cloth, each containing 38 yards, at $8 a yard?

10. What is the difference between 8 × $78 and 9 × $67?

11. What cost $12\frac{1}{2}$ yards of cloth at 28¢ a yard?

288. 1. Add $3.95, $8.79, $14.90, $9.67, $8.19 and $9.95.

2. From $87.56 take $58.48. 3. Multiply $18.75 by 36.

4. Find $\frac{5}{8}$ of $70. 5. Multiply $3.65 by 257.

6. How many bushels are there in 279 quarts?

7. What cost 6 bushels of apples at 10 cents a peck?

8. How many weeks are there in 259 days?

9. At $7 each, 118 school desks cost how much?

10. How many cabbages at 8 cents each, will pay for 10 bushels of potatoes at 60 cents a bushel?

11. How many yards in 294 feet?

289. 1. Add $7.29, $9.63, $18.78, $8.96, $9.75, $8.56 and $19.

2. Take $39.78 from $71. 3. From $101.60 take $39.78.

4. Multiply 876 by 935. 5. Find $\frac{3}{8}$ of $9.68.

6. A tax-collector received $916 on Monday, $879.60 on Tuesday, $583 on Wednesday, $1496.85 on Thursday, $719.39 on Friday, and $1978 on Saturday. How much did he collect during the week?

7. Find the difference between 9×$783 and 8×$718.

8. A nine acre lot cost $800, and was sold at $85 per acre; how much was lost?

9. A man born in 1829, died in 1873; how many years did he live?

10. Multiply $28 by 250. Make a problem.

290. 1. Add 796, 5879, 908, 790, 9469 and 897.

2. Take $29.37 from $56.70. 3. From $97.49 take $39.87.

4. Multiply 574 by 348. 5. Find $\frac{3}{5}$ of $716.

6. The loss on a saddle sold for $30, was $9.60; how much did it cost?

7. A man having $90.50, lacks how much of having enough to buy a watch and chain costing $112?

8. How many feet in 8 rods? in 75 rods?

9. How much are 19 tons of hay worth at $18 per ton? at $28 a ton?

10. 72 cents are 4 fifths of how much?

291. 1. Add $58.79, $9.87, $98.46, $6.97, $7.98 and $93.96.

2. Take $17.90 from $31. 3. From $64.73 take $9.89.

4. Multiply $8.85 by 56. 5. Divide 36478 by 8.

6. How many inches in 124 square feet?

7. How many feet in 39 miles?

8. What cost 160 acres of land at $45 per acre?

9. A grocer bought eggs at 15 cents a dozen and sold them at 23 cents a dozen; how much did he gain on 24 dozen?

10. How many yards are there in 396 inches?

11. What cost 24$\frac{3}{4}$ yards of cloth at 40 cents a yard?

12. How many yards in a mile? in 23 miles?

13. How do you find $\frac{5}{8}$ of any number?

Subtraction.

Table.	Exercises. — I.	II.	III.	IV.
9—9=				
10—9=	10	13	16	49
11—9=	9	23	26	40
12—9=	13	15	17	33
13—9=	12	25	27	17
14—9=	15	35	20	13
15—9=	25	43	19	24
16—9=	14	31	39	51
17—9=	11	44	27	22
18—9=	21	32	43	47

292. 1. Learn the Table to 15—9.

2. Take *nine* from each number in columns I. and II.

3. A farmer having 14 horses, sold 9 of them; how many did he then lack of having 18?

4. If you have $22, spend $9, then earn $7, how much will you have?

5. A grocer bought 21 boxes of soap; after selling 9 of them, how many had he left?

6. I shall have how much left at the end of the year, if I earn $1,000 and spend $696?

7. Take $7.96 from $11.40. 8. Multiply $7.85 by 75.

9. Multiply 856 by 547. 10. Find $\frac{5}{9}$ of $140.

293. 1. Learn the Table to 18—9.

2. Take *nine* from each number in columns III. and IV.

4. John said: "When I earn $9 more, I shall have $15," how much had he?

4. A boy traveled 26 miles in 2 days; if he traveled 9 miles the first day, how far the second day?

5. A jeweler gained $9 on a watch which he sold for $37; how much did it cost him?

6. Take $19.95 from $48. 7. Take $93.39 from $158.

8. Multiply 73878 by 7. 9. Find $\frac{1}{8}$ of 478848.

10. $37×29=? Make a problem.

11. $19.20 are 5 ninths of how much?

294. 1. Subtract *nines* from 93 to 3; from 95 to 5.

2. John is 17 years old; how old was he 9 years ago?

3. There were 23 pupils in a class before 9 went home; ho many remained?

4. What cost 24 fence posts at 28 cents each?

5. Find 5 eighths of 360 bushels.

6. 7 men in partnership earned $9730; how much was eac man's share?

7. John said: "If I sell $\frac{2}{3}$ of my chickens, I shall have 1 left;" how many had he?

8. Add 939, 2793, 810, 395, 978, 849 and 997.

9. Take 9796 from 13740. 10. From $94.39 take $91.79

295. 1. Add $79.38, $187.69, $93.95, $69.48, $89.56, $94.92 $89.36 and $193.94.

2. Take $69.49 from $87.52. 3. From $175.60 take $79.89

4. Divide 23796 by 8. 5. Find $\frac{1}{8}$ of 94386.

6. $48.75×37=? Make a problem.

7. How many hours in 29 days?

8. After spending $98.70, a man had $159.80 left; how muc had he at first?

9. A man sold $\frac{1}{6}$ of his farm of 1674 acres; how much had h left?

10. Multiply $78.60 by 9, and find $\frac{1}{4}$ of the product.

296. 1. Add $19.38, $70.69, $39, $47, $9.68 and $18.89.

2. From $96.58 take $79.60. 3. Take $19.69 from $57.

4. Multiply $87.80 by 29. 5. Multiply $9.95 by 67.

6. $2.80 are $\frac{2}{7}$ of how much? $\frac{4}{7}$ of how much?

7. Bought a suit of clothes for $19, a pair of shoes for $7, an a fur cap for $9; I handed the clerk a 50-dollar bill; how muc did I get in change?

8. A drover bought 390 sheep at one time, 389 at another, an 278 at a third; from the whole he sold 595; how many had h left?

9. How much added to $19.30 gives $37?

10. 9 times 27 are how many times 3?

11. How many times $6 are 8 times $9?

297. 1. Add $7.55, $9.36, $6.97, $9.55, $18.97 and $9.46.

2. From $56.70 take $28.97. 3. Take $9.78 from $16.

4. Multiply $3.80 by 78. 5. Find ⅛ of $110.00

6. A lady went shopping with $20; her purchases amounted to $6.65; how much had she left?

7. $19.50 were taken from how much to leave $56.90?

8. What must I pay for 39 yards of carpet, at $1.18 a yard?

9. Learn the **Table for Solid or Cubic Measure**:—

1728 *cubic inches* (*cu. in.*) =1 *cubic foot* (*cu. ft.*),
27 *cubic feet* =1 *cubic yard* (*cu. yd.*).

How many cu. in. in 7 cu. ft.? in 27 cu. ft?

10. How many sq. ft. in the floor of this room?

298. 1. A lady paid $39 for a sofa, $37.56 for a set of chairs, $18.75 for a bureau; $45.90 for a lot of dishes and $9.80 for a table; how much for all?

2. Take $29.89 from $45.93. 3. Take $87.59 from $104.

4. Multiply $8.87 by 56. 5. Find ⅛ of $148.

6. How many are 75 times 88 feet?

7. How many are 8×16 feet? 8×½ foot? 8×16½ ft.?

8. If a man travels 38 miles a day, how far will he travel in 26 days?

9. Repeat the Table for Dry Measure; Long Measure.

10. $4 are ⅛ of how much? $40 are ⅛ of how much?

299. 1. Add $7.90, $3.59, $8.40, $8.50. $8 and $9.65.

2. $714.85—$396.29=? 3. Take $59.37 from $87½.

4. $58.84×87=? 5. Find ⅛ of $63.52.

6. At $3.80 a pair, what cost 3 dozen pairs of shoes?

7. At 9 cents a dozen, how many dozen eggs will pay for 12 yards of cloth at 30 cents a yard?

8. How much must I pay for 9 pounds of butter at 28 cents a pound, 7 gallons of syrup at 85 cents a gallon, and 3 sacks of flour at $2.15 each?

9. How much are 7 gallons of milk worth, at 5 cents a quart? at 3 cents a pint?

10. How many inches in 3½ yards?

11. $56 are 7 eighths of how much?

Multiplication.

Table.	**Exercises.—**			
1×9=	I.	II.	III.	IV.
2×9=	2	7	9	10
3×9=	5	4	5	15
4×9=	3	6	8	20
5×9=	6	3	10	40
6×9=	4	5	20	7
7×9=	7	7	30	17
8×9=	5	2	8	8
9×9=	6	5	10	18
10×9=	3	4	12	25

300. 1. Learn the Table to 7×9.

2. Multiply *nine* by each number in columns I. and II.

3. How many square feet in 5 square yards? (S. 10.)

4. What cost 6 dozen eggs at 9 cents a dozen?

5. How many are 4 times 9, plus 8? 3×9, +6?

6. If 4 men build a wall in 9 days, how long should it take 6 men?

7. $27 are $\frac{1}{9}$ of how much? $\frac{3}{9}$ of how much?

8. If 3 plows cost $87, how much will 5 cost?

9. Find 5 times $\frac{1}{8}$ of 1752. 10. Multiply $9.29 by 6.

301. 1. Learn the Table to 10×9.

2. Multiply *nine* by each number in columns III. and IV.

3. What cost 8 barrels of flour, at $9 a barrel?

4. What cost 8 acres of land, at $90 an acre?

5. If a boy earns $9 a month, how much will he earn in 9 weeks?

6. What will 7 tons of iron cost at $19 a ton?

7. How many pounds in 6 barrels of flour? 34 bbl.?

8. How many square feet in 15 square yards?

9. Take 928 from 1727, and multiply the result by 8.

10. Add 896, 1709, 958, 1397, 929, 1879 and 987.

11. Multiply $9.25 by 6. Make a problem.

12. 90+30+50+90+80+100+70=?

13. Take 8, ×5, ÷2, +7, ÷ 3, ×8, ÷2, =?

302. 1. Count by *nines* from 9 to 90; from 7 to 88.

2. How many times $6 are 10 times $9?

3. Seven times 96 are how many times 8?

4. Find the value of 7 building lots at $95 each.

5. 8 horses cost $760; find the average price.

6. A horse, harness and carriage cost $314; the horse cost $130, the harness $39; find the cost of the carriage.

7. How many cords of wood cost $150, at $6 a cord?

8. How many tops, at $.90 a dozen, will $.45 buy?

9. Multiply $39.50 by 6. 10. Multiply $7.49 by 68.

303. 1. Add $19.12, $7.19, $9.40, $3.89, $7.63, $38.04, $9.72, $8.98, $39.45, $6.59 and $67.95.

2. Take $97.94 from $158. 3. Multiply 7969 by 286.

4. Multiply $9.56 by 37. 5. Find ¼ of ⅛ of 1176.

6. What cost 9 wagons, if 6 cost $474?

7. Eight times what number equal 4320?

8. How much greater than 795 is ⅐ of 9391?

9. A farmer harvested 1795 bushels of wheat; he sold 407 bushels at one time, 298 at another, and 639 at a third; how many bushels had he left?

10. What will 10 bushels of oats cost, at 90 cents a bushel? 20 bushels?

304. 1. Add 976, 893, 7019, 986, 799, 1954, 879, 917, 3978, 639, 4597, 969 and 2478.

2. From $76.50 take $29.49. 3. Multiply 79698 by 7.

4. Multiply $93.76 by 59. 5. Find ⅐ of 6977.

6. Robert is 19 years old; in how many years more will he be 35 years old?

7. How many square feet in 31 square yards?

8. A boy sold 2 bushels of chestnuts at 5 cents a quart; how much did he get for them?

9. How many quarts in 19 gallons?

10. Eight tables cost $84; they were sold at $12.50 each; how much was gained?

11. Having $100, how many buffalo-robes, at $9 each could you *buy?*

305. 1. Add 3969, 2897, 76938, 8097, 59496, 38959, 9878, 76097, 9480, 7989, 9708, and 76989.

2. From 78056 take 59792. 3. Multiply 589 by 37.

4. Divide 68540 by 8. 5. Find $\frac{1}{8}$ of 7835.

6. What cost 9 barrels of flour, if 7 barrels cost $119?

7. John bought a kite-string 144 yards long; the kite flew away with $\frac{3}{8}$ of it; how much was left?

8. A dealer bought 14 gallons of milk at 9 cents a gallon, and sold it at 5 cents a quart; find his gain.

9. What was the price of each, if 8 lamps cost $15?

10. A man earns $2.25 a day; how much will he earn in 9 weeks if he works 6 days each week?

306. 1. Add 3879, 9329, 5496, 89376, 8989, 5904, 9087, 8678, 76949, and 9498.

2. Take 73858 from 79460. 3. Multiply $9.75 by 32.

4. Find $\frac{1}{8}$ of 73865. 5. Find $\frac{5}{8}$ of 7240.

6. A man owning 640 acres of land, sold $\frac{3}{8}$ of it; how many acres had he left?

7. $76 are 4 sevenths of how much?

8. 7 times $56 are how may times $8?

9. One man has 84 sheep, and another has 6 times as many; how many have both?

10. How much are 7 bushels of chestnuts worth at 85¢ a peck?

307. 1. Add 7905,799, 80098, 50690, 8097, 83896, 7809, 86493, 4987, and 76498.

2. Take 79369 from 97483 3. Multiply $75.46 by 8.

4. Divide 27386 by 8. 5. Find $\frac{5}{8}$ of 3760.

6. A trader bought 9 horses at $250 each, and sold them at $219 each; find the loss.

7. A man bought a lot for $840, then built a house on it costing $\frac{1}{8}$ as much more than the house; how much did both cost?

8. $756 are 7 eighths of how much?

9. How many square rods in 28 acres?

10. How many bushels in 720 quarts?

11. What cost $8\frac{3}{4}$ yd. of silk at $2 per yd., and 27 yd. of trimming at 85¢ a yard?

Division.

Tables.—			Exercises.—	
I.	II.	III.	I.	II.
9÷9=	1÷9=0, +1	$\frac{1}{9}$ of 1=$\frac{1}{9}$	18	9
18÷9=	2÷9=0, +2	$\frac{1}{9}$ of 2=$\frac{2}{9}$	45	11
27÷9=	Etc.,	$\frac{1}{9}$ of 3=$\frac{1}{3}$	27	12
36÷9=	9÷9=1	Etc.,	36	27
45÷9=	10÷9=1, +1	$\frac{1}{9}$ of 9=1	63	26
54÷9=	11÷9=1, +2	$\frac{1}{9}$ of 10=1$\frac{1}{9}$	81	55
63÷9=	12÷9=	$\frac{1}{9}$ of 11=1$\frac{2}{9}$	54	59
72÷9=	Etc., to	$\frac{1}{9}$ of 12=1$\frac{1}{3}$	90	48
81÷9=	89÷9=9, +8	Etc., to	72	61
90÷9=	90÷9=	$\frac{1}{9}$ of 90=	63	39

308. 1. Learn Table I.

2. Divide each number in column I., by *nine;* find *one ninth* of each.

3. How many square yards in 72 square feet?

4. At $9 each, how many dictionaries cost $54?

5. How many boards 9 feet long may be cut from 5 boards 18 feet long?

6. Write the numbers from 70 to 90 and add them?

7. Take $93.96 from $119.

8. Multiply 59798 by 7.

9. Divide 72081 by 9.

10. Divide 27963 by 9.

309. Learn Table II, to 63÷9, and Table IV. to $\frac{1}{9}$ of 63.

2. Divide each number in column II. by *nine;* find *one ninth* of each.

3. I paid $40 for 9 sheep; find the average cost.

4. At $9 a cord, how much wood will $30 buy?

5. If you have but 60 cents, how many dozen eggs can you buy at 9 cents a dozen?

6. 9 horses cost $450; find the price of each.

7. Add $79.06, $95.89, $39.28, $7.93, $8.39 and $17.68.

8. Take $79.38 from $90.52.

9. Multiply $8.29 by 76.

10. Divide 333972 by 9.

11. Find $\frac{1}{9}$ of 2898.

12. $195 × 27=? Make a problem.

13. $35.10 are 9 sixteenths of how much?

310. 1. Learn Table II. to 90÷9, and Table III. to $\frac{1}{9}$ of 90.

2. Make a column like II.; divide each by *nine;* find *one ninth* of each.

3. I paid 75 cents for 9 pounds of sugar; what was the price per pound?

4. How many square yards in 70 square feet?

5. If you have 72 marbles, and give away $\frac{1}{9}$ of them how many will you have left?

6. If you have but 80 cents, how many tops can you buy when the price is 9 cents each?

7. A grocer paid \$93 for 9 boxes of oranges; what was the cost per box?

8. Multiply $\frac{1}{9}$ of 1467 by 8. 9. Find $\frac{1}{9}$ of 7×829.

10. Divide \$450 by \$9. Make a problem.

311. 1. Subtract *nines* from 97 to 7; from 93 to 3.

2. What is the price of each, when 9 lamps cost \$15?

3. At \$39 a ton, what cost 27 tons of steel?

4. A trader paid \$819 for 9 mules; what was the average cost? What would 37 cost?

5. How long should it take 9 men to do as much work as 90 men do in one day?

6. 1584 yards of cloth were woven by 9 looms in one day; how much was woven by each loom?

7. \$75 are $\frac{1}{9}$ of how much? $\frac{8}{9}$ of how much?

8. Add 937, 594, 6938, 789, 908, 797, 7179 and 897.

9. Divide 73694 by 9. 10. Find $\frac{1}{9}$ of 17398.

312. 1. Add 27093, 8979, 1968, 9436, 988 and 18798.

2. Take 9396 from 17054. 3. Multiply 958 by 768.

4. Divide 176350 by 9. 5. Find $\frac{4}{9}$ of \$87.30.

6. What cost 7 bushels of onions at \$.60 a peck?

7. John's kite string was 296 feet long; he added 128 feet, then the kite flew away with 175 feet of it; how much had he left?

8. Find $\frac{2}{9}$ of 7839, and take that number from 6070.

9. How many days in 8 years and 79 days?

10. Seven times \$98 are how many times \$9?

11. How many cu. ft. in 1397 cu. yd.?

313. 1. Add $79.06, $7.99, $80.98, $79, $63.49 and $97.

2. From 756004 take 398493.   3. Multiply 789 by 567.

4. Multiply $79.25 by 65.   5. Divide $73.80 by 3.

6. Divide 37365 by 5; by 12; by 31; by 72.

7. How would you find $\frac{2}{3}$ of 756? $\frac{5}{9}$ of 756?

8. How many feet are there in 798 inches?

9. Nine men build a house in 4 days; how long should it take 12 men?

10. A man bought a lot for $720, then built a house on it costing $\frac{1}{8}$ as much more than the lot; how much did the house cost? both cost?

314. 1. Write the numbers from 80 to 100 and add them.

2. How many chickens at 25 cents each, will pay for 20 yards of cloth at 15 cents a yard?

3. Multiply $59.60 by 14.   4. Divide 7837 by 24.

5. Divide $8175 by $25.   6. Divide 6748 by 43.

7. How many yards in 856 inches?

8. At $36 per acre, how many acres of land cost $2880?

9. How many days in 360 hours?

10. How many pounds in 1000 ounces?

315. 1. How many bushels of wheat at 75 cents a bushel, are worth as much as 42 yards of cloth at 25 cents a yard?

2. A dealer bought 346 tons of coal at $3.15 a ton, and sold it at $3.60 a ton; find his gain.

3. At $1.65 cents a rod, how much will a fence a mile long cost? a fence around a field $\frac{1}{2}$ mile square?

4. How many square yards in a floor of a room 24 feet long and 17 feet wide?

5. Three fourths of the value of a farm are $9750; what is the whole value?

6. Multiply $78.59 by 37.   7. Multiply $9.40 by 207.

8. Divide 83763 by 73.   9. Divide $57.50 by $.25.

10. $98÷$.35=? Make a problem.

11. How many cubic yards in 540 cubic feet?

12. What cost 28 tons of hay at $16.50 a ton?

13. How many acres in 1820 square rods?

316. 1. Add $7.25, $9.63, $12.87, $18, $36, $9.78, $38.84, $19.42, $24.79, $237 and $93.18.

2. At $.06 each, how many pencils will $1.75 buy?

3. How much will the fence around a field 72 rods long and 48 rods wide, cost at $1.50 a rod?

4. How many ounces in a barrel of flour?

5. How many feet in 47 rods?

6. I have $6, how many chickens, at $.30 each, can I buy? At $.40 each?

7. How many square yards in 816 square feet?

8. How many pints in 7 gal. 3 qt.?

9. Divide $17.35 by $.75. 10. Find $\frac{5}{9}$ of $76.50.

317. 1. Gave 64 horses worth $125 each for 160 acres of land; what was the land worth per acre?

2. Multiply 5397 by 308. 3. Divide 70398 by 468.

4. How many bushels of oats at $.25, are worth as much as 42 bushels of wheat at $70.25?

5. What cost 4 lb. 8 oz. of butter, at 20 cents a pound?

6. How many square yards in a floor 24 ft. long and 18 ft. wide?

7. What cost 57 lb. of tea at $.49 a pound, and 78 lb. of cheese at $.09 a pound?

8. $45.60 × 38 = ? Make a problem.

9. Divide $48.64 by $32. 10. Divide 79368 by 417.

318. 1. Add $39.63, $78.95, $27.89, $9.46, $9.17, $38.78, $94.76, $29.54 and $87.09.

2. A suit of clothes costing $27, was sold at a loss of $9.20, find the selling price.

3. How many pounds in 1000 ounces?

4. How many hours in 3 days and 19 hours?

5. How many acres in a farm 180 rods long and 100 rods wide? (Make a sketch.)

6. How much will each get, if $12.40 be divided equally among 8 boys?

7. Take $85.83 from $87. 8. Multiply $5.60 by 49.

9. Divide 74390 by 480. 10. Divide 38768 by 390.

319. 1. Add $9.76, $18.95, $7.45, $19.17, $7.58, $8.67 $12.83, $8.47 and $28.66.

2. $115.60—$87.85=? 3. Multiply $.18 by 386.

4. Divide 93786 by 987. 5. Divide $75.48 by $.06.

6. If 20 tons of hay cost $115, how much can be bought for $471.50?

7. 28 sacks of flour cost $39.48; how much will 50 sacks of the same kind cost?

8. What cost 46 lb. of lard at $.12½ a pound?

9. How many minutes in a day? in July?

10. 175 bales of cotton weigh 59200 pounds; what is the average weight?

320. 1. 24 men construct a roadway in 45 days; how long should it take 30 men?

2. How many miles in 47684 yards?

3. 5.5 yd. make 1 rod; how many rods in 2244 yd.?

4. What cost 14.75 tons of coal at $8.75 a ton?

5. I paid $18.75 for a saddle, and 5 times as much for a horse; how much did both cost?

6. Sold 84 sheep at $3.75 a head, receiving ¼ of the amount in cash, and a note for the balance; what was the amount of the note?

7. Take $87.67 from $107. 8. Multiply $9.57 by 8.5.

9. Divide $3768 by $.75. 10. Find ⅜ of $70.40.

321. 1. Add 9.763, 9.89, 708.95, 9.63, 78.04, 68.907, 49.58, 4.3725, 14.083, 830.7 and 59. 097.

2. How many yards of cloth at 8 cents, cost $3.50?

3. At 8 cents a dozen, how many dozen eggs cost as much as 6 lb. of tea at $.38 a pound?

4. How many square yards in a floor 20 feet long and 15 feet wide?

5. How many days in 258 hours?

6. How many yards in 78 rods? in ¾ mi.?

7. What cost 5 bu. of potatoes at $.90 a peck?

8. Take $7.89 from $13. 9. Find ⅝ of 801 yards.

10. What cost 29 tons of iron ore at $5.70 a ton?